SOLICITATION, OFFER AND AWARD	1. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 350)	RATING	PAGE OF PAGES
		N	1 | 30

2. CONTRACT NO.	3. SOLICITATION NO.	4. TYPE OF SOLICITATION	5. DATE ISSUED	6. REQUISITION/PURCHASE NO.
	DE-RP52-09NA28609	☐ SEALED BID (IFB) ☒ NEGOTIATED (RFP)	**03 NOV 2008**	

7. ISSUED BY FAD/SCSD CODE 898358	8. ADDRESS OFFER TO *(If other than Item 7)*
DEPARTMENT OF ENERGY NNSA SERVICE CENTER PO BOX 5400 ALBUQUERQUE, NM 87185-5400 LETICIA Y. POTTS 505-845-4371 LPOTTS@DOEAL.GOV	

NOTE: In sealed bid solicitations "offer" and "offeror" mean "bid" and "bidder".

SOLICITATION

9. 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory

10. FOR INFORMATION CALL:	A. NAME	B. TELEPHONE *(Include area code)* *(NO COLLECT CALLS)*	C. E-MAIL ADDRESS
	See Block 7	See Block 7	See Block 7

11. TABLE OF CONTENTS

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OFFER (*Must be fully completed by offeror)*

NOTE: Item 12 does not apply if the solicitation includes the provisions at 52.214-16, Minimum Bid Acceptance Period.

12. In compliance with the above, the undersigned agrees, if this offer is accepted within **120** calendar days *(60 calendar days unless a different period is inserted by the offeror)* from the date of receipt of offers specified above, to furnish any or all items upon which prices are offered at the price set opposite each item, delivered at the designated point(s), within the time specified in the schedule.

13. DISCOUNT FOR PROMPT PAYMENT (See Section I, Clause No. 52.232-8)	10 CALENDAR DAYS %	20 CALENDAR DAYS %	30 CALENDAR DAYS %	CALENDAR DAYS %

14. ACKNOWLEDGEMENTS OF AMENDMENTS *(The offeror acknowledges receipt of amendments to the SOLICITATION for offerors and related documents numbered and dated:*	AMENDMENT NO.	DATE	AMENDMENT NO.	DATE
	001	13 NOV 2008	003	05 Jan 2009
	002	03 DEC 2008		

15A. NAME AND ADDRESS OF OFFEROR	CODE	FACILITY	16. NAME AND TITLE OF PERSON AUTHORIZED TO SIGN OFFER *(Type or print)*

15B. TELEPHONE NO. *(Include area code)*	15C. CHECK IF REMITTANCE ADDRESS ☐ IS DIFFERENT FROM ABOVE - ENTER SUCH ADDRESS IN SCHEDULE.	17. SIGNATURE	18. OFFER DATE

AWARD *(To be completed by Government)*

19. ACCEPTED AS TO ITEMS NUMBERED	20. AMOUNT	21. ACCOUNTING AND APPROPRIATION

22. AUTHORITY FOR USING OTHER THAN FULL AND OPEN COMPETITION: ☐ 10 U.S.C. 2304(c) ( ) ☐ 41 U.S.C. 253(c) ( )	23. SUBMIT INVOICES TO ADDRESS SHOWN IN *(4 copies unless otherwise specified)*	ITEM

24. ADMINISTERED BY *(If other than Item 7)* CODE	25. PAYMENT WILL BE MADE BY CODE

26. NAME OF CONTRACTING OFFICER *(Type or print)*	27. UNITED STATES OF AMERICA *(Signature of Contracting Officer)*	28. AWARD DATE

IMPORTANT - Award will be made on this Form, or on Standard Form 26, or by other authorized official written notice.

L005 RESTRICTION OF CONTACTS (APR 2008)

Concurrent with the release of this RFP, appropriate notification will be given to the NNSA's management chain to advise them that the 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory source selection is in progress and that contact by participating Offerors on the subject of this RFP with anyone other than the Contracting Officer or Contract Specialist is inappropriate. With the exception of provisions provided in this solicitation, potential Offerors to this RFP shall not attempt such contact until after award announcements are made by the Contracting Officer.

L007 AMENDMENT OF SOLICITATION PRIOR TO PROPOSAL CLOSING DATE (FEB 2007)

The Government reserves the right to amend the solicitation prior to the closing time for receipt of proposals by issuance of formal amendment(s) (Standard Form 30) to this RFP. If such amendments require material changes, the proposal closing date may be postponed by enough days to enable Offerors to revise their proposals. In such cases, the amendment will include an announcement of the new proposal closing date and time.

L008 QUESTIONS REGARDING THIS SOLICITATION (FEB 2007)

Discussions and/or correspondence relating to this RFP must be submitted via IIPS at: <http://e-center.doe.gov/doebiz.nsf/Help?OpenForm>. Please submit questions regarding this RFP in writing by Noon (EASTERN STANDARD TIME) on **December 2, 2008**. A copy of all questions and their respective answers will be published on the IIPS web site. An amendment to the solicitation will be issued if changes to the RFP are needed as a result of the questions. It may not be possible to respond to questions or comments received after this time. If an Offeror believes that the requirements in these instructions contain an error or omission, the Offeror shall immediately notify the Contracting Officer in writing with supporting rationale.

L009 NUMBER OF AWARDS (FEB 2007)

It is anticipated that there will be one (1) award resulting from this solicitation. However, the Government reserves the right to make multiple awards, or no award, if it is considered to be in the Government's best interest to do so.

L010 SUBMISSION OF COST OR PRICING DATA (JUL 2008)

It is anticipated that pricing of this action will be based on adequate price competition; therefore, Offerors are not required to submit a Certificate of Current Cost or Pricing Data. However, if after receipt of proposals, it is determined that adequate price competition does not exist, cost or pricing data (see FAR 15.406-2, Certificate of Current Cost or Pricing Data) shall be required. The Offeror shall provide current, complete and accurate cost or pricing data within 14 calendar days after receipt of the Contracting Officer's request.

L011 PROPOSAL SUBMISSION ADDRESS, DUE DATES, AND HAND CARRIED OFFERS (OCT 2008)

(a) Proposals must be submitted via the Industry Interactive Procurement System (IIPS) with the exception of Classified and Unclassified Controlled Nuclear Information (UCNI) information (see L011, paragraph (c) below). Proposals must be received through the IIPS web site NO LATER THAN 4:00 PM (EASTERN STANDARD TIME) on **January 20, 2009**. See FAR 52.215-1(c)(3)(ii) "Instructions to Offerors-Competitive Acquisition," for treatment of late proposals. Submission of electronic proposals via IIPS will constitute submission of signed copies of the required documents. Each proposal must be submitted in accordance with the instructions in the IIPS User Guide, which is available at: <http://e-center.doe.gov/doebiz.nsf/Help?OpenForm>. It is the responsibility of the Offeror, prior to the offer due date and time, to verify successful transmission in accordance with the Proposal Response (Submission) Instructions in the IIPS User Guide. Proposal files are to be formatted in the following applications:

Adobe Acrobat 5.0 (PDF) or higher, Word 2000 or higher, Excel 2000 or higher, or PowerPoint 2000 or higher.

(b) In addition to the submission of the proposal via IIPS, Offerors must also submit Hard Copies of Volume I, II, and III along with a copy on a CD or DVD, with the exception of any classified and UCNI information, at the address listed below POSTMARKED NO LATER THAN **January 20, 2009**:

Mailing Address:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
P.O. Box 5400
Albuquerque, NM 87185-5400

Overnight Express Address:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
Pennsylvania and H Streets
Albuquerque, NM 87116

Hand Carried Address*:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
Building 20388
Kirtland AFB, NM

* Offers may be hand carried as long as they are received before the closing date established herein. Offerors are cautioned that rigorous security procedures are in place at this Government facility that may result in additional time being required to hand carry documents. The responsibility of delivery of any hand carried documents within the stated due date in this RFP rests completely with the Offeror.

(c) Classified information shall be submitted in accordance with the requirements in DOE Manual 470.4-4 Section A, Classified Matter Protection and Control. UCNI information shall be submitted in accordance with the requirements of DOE Manual 471.1-1, Identification and Protection of Unclassified Controlled Nuclear Information Manual, Chapter II. The Offeror shall adhere to the marking, transmission, and creation requirements of the DOE Manuals. Offerors must submit Hard Copies only of Classified and UCNI information at the address listed below POSTMARKED NO LATER THAN **January 20, 2009**:

Classified Mailing Address:

CLASSIFIED OUTER LABEL
National Nuclear Security Administration
Service Center
P. O. Box 5400
Attn: Leticia Potts
Albuquerque, NM 87185-5400

CLASSIFIED INNER LABEL
Same as above

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

B001 ACRONYMS (APR 2008)

Common acronyms that may be used in this document include:

ASTM - American Society for Testing and Materials
CFR - Code of Federal Regulations
CLIN - Contract Line Item Number
CO - Contracting Officer
COR - Contracting Officer's Representative
CPAs - Cargo Pallet Assemblies
CRTs - Cargo Restraint Tie-downs
CS - Contract Specialist
DOE - Department of Energy
EST - Estimate
FAR - Federal Acquisition Regulation
FP - Fixed-Price
FFP - Firm Fixed-Price
FY - Fiscal Year
IAW - In Accordance With
HEU - Highly Enriched Uranium
Kg - Kilograms
LEU - Low Enriched Uranium
M&O - Management and Operating
MARO - Months after Receipt of Order
MO - Month
MT - Metric Tons
MTU - Metric Tons Uranium
NNSA - National Nuclear Security Administration
NRC - Nuclear Regulatory Commission
NSP - Not Separately Priced
PWS - Performance Work Statement
QTY - Quantity
RFP - Request for Proposal
SRA - Shipper/Receiver Agreement
SNM - Special Nuclear Materials
SWU - Separative Work Unit
TBD - To Be Determined prior to award
U - Uranium
UF_6 - Uranium Hexafluoride
UCNI - Unclassified Controlled Nuclear Information

Section J attachment entitled, "Definitions," is a list of some commonly used definitions in this contract.

B002 CONTRACT TYPE AND ESTIMATED VALUE (AUG 2008)

This is a firm fixed price type contract arrangement where the Contractor will be compensated for down-blending services by receiving title to a portion of the Derived LEU, and will be compensated for storage by having use of a portion of the Derived LEU.

The total price of this contract is **TBD** . Note: this total price is based solely on the value of Derived LEU the Contractor shall receive for services provided. Furthermore, the value of Derived LEU will fluctuate over time based on current market prices of the derived LEU (reference Section G, Clause G002 entitled, "Compensation).

ITEM	SUPPLIES OR SERVICES	Qty Purch Unit	Unit Price Total Item Amount

0001

Noun: RECEIPT, INVENTORY, PROCESSING, AND DOWN-BLENDING OF HEU TO LEU
ACRN: U
Contract type: J - FIRM FIXED PRICE
Descriptive Data:
The Contractor shall furnish all personnel, facilities, services, materials, supplies, travel (except as may be expressly set forth in this contract as furnished by the Government) and otherwise do all things necessary for, or incidental to, providing the requirements specified in the Section J attachments entitled, "Performance Work Statement for 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory," at the prices listed below. These prices will be used to calculate complete compensation for this effort and shall be in accordance with Section G clause G002 entitled, "Compensation."

[Offeror to fill in values below]:

(1) HEU Metal (Alloyed and Unalloyed) at 9,002 KgU which includes 7,516 Kg U^{235} is priced at
(A) $_____ per KgU of Derived LEU (**inclusive** of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from metal (insert Kgs) _____ for a total extended price of $_____.

(2) HEU Oxide and Compounds at 3,099 KgU which includes 2,113 Kg U^{235} is priced at
(B) $_____ per KgU of Derived LEU (**inclusive** of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from oxide and compounds (insert Kgs) _____ for a total extended price of $_____;

(3) HEU Reactor Fuel, Sources and Standards at 48 KgU which includes 38 Kg U^{235} is priced at
(C) $ _____ per KgU of Derived LEU (**inclusive** of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from reactor fuel, sources, and standards (insert Kgs) _____ for a total extended price of $_____

(4) Total for extended price of items (1) through (3) above: $_____

(5) The cost of Diluent (blendstock) used by the Contractor during down-blending shall be included in the unit pricing of CLIN 0001.

(6) The Contractor shall store and deliver the total quantity of proposed derived KgU LEU set forth in paragraphs (1) through (3) above, subject to clause 52.211-16 entitled "Variation in Quantity," clause H003 entitled “Variation in Quantity, and clause G002 entitled "Compensation," and in accordance with Section J attachment entitled, "Holding Agreement."

ITEM	SUPPLIES OR SERVICES	Qty Purch Unit	Unit Price Total Item Amount

0002

Noun: STORAGE OF LEU AND PREPARATION FOR SHIPMENT OF UF_6
ACRN: U
Contract type: J - FIRM FIXED PRICE
Descriptive Data:
The Contractor shall furnish all personnel, facilities, services, materials, supplies, travel (except as may be expressly set forth in this contract as furnished by the Government) and otherwise do all things necessary for, or incidental to, providing the Storage of LEU and Preparation for Shipment of UF_6 in accordance with the Section J attachments entitled, "Performance Work Statement for 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory" and "Holding Agreement." The Contractor shall store the LEU in a Government account for up to 9 years. Complete consideration for this effort shall be in accordance with Section G, Clause G003 entitled "Consideration."

0003

Noun: REPORTS
ACRN: U
Contract type: J - FIRM FIXED PRICE
Descriptive Data:
The Contractor shall submit reports in accordance with Section J attachment entitled, "Reporting Requirements Checklist." This CLIN is not separately priced (NSP) and the price for this effort is included in CLINs 0001 and 0002 as applicable.

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

C001 PERFORMANCE WORK STATEMENT (PWS) (APR 2008)

The PWS is included as Attachment 1 to this contract and is listed in Part III, Section J.

C002 HOLDING AGREEMENT (FEB 2007)

The Holding Agreement is included as an attachment to this contract and is listed in Part III, Section J, Attachment 2.

C003 REPORTS (FEB 2005) (TAILORED)

Reports shall be in accordance with the "Reporting Requirements Checklist," as listed in Part III, Section J, Attachment 3.

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

D001 PACKAGING AND MARKING (JAN 2007)

(a) Packaging and marking of HEU and LEU shall be in accordance with applicable regulations and requirements of the U.S. Department of Energy, U.S. Department of Transportation, U.S. Nuclear Regulatory Commission and International law.

(b) Each package, report, or other deliverable product shall be accompanied by a letter or other document that:

(1) Identifies the contract number under which the item is being delivered.

(2) Identifies the deliverable item number or report requirement that requires the delivered item(s).

(c) For any package, report, or other deliverable being delivered to a party other than the Contracting Officer, a copy of the document required in (b) above shall be simultaneously provided to the Contract Specialist administering the contract, as identified in Section G of the contract.

D003 SECURITY REQUIREMENTS (FEB 2005) (TAILORED)

The Contractor shall comply with the security requirements for packaging, marking, mailing, and shipping classified materials as prescribed by applicable regulations and requirement of the U.S. Department of Transportation, the U.S. Nuclear Regulatory Commission and those DOE Safeguards and Security directives identified in Section J attachment entitled, "List of Applicable DOE Directives."

I. NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.246-2	INSPECTION OF SUPPLIES -- FIXED-PRICE (AUG 1996)
52.246-4	INSPECTION OF SERVICES -- FIXED-PRICE (AUG 1996)
52.246-16	RESPONSIBILITY FOR SUPPLIES (APR 1984)

II. NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

E001 INSPECTION AND ACCEPTANCE (FEB 2005) (TAILORED)

(a) Inspection of all items and/or work effort delivered under this contract shall be accomplished by the COR, or any other duly-authorized Government representative identified by the Contracting Officer.

(b) Acceptance of all items and work effort under this contract (including reporting requirements) shall be accomplished by the Contracting Officer, the COR, or other duly-authorized Government representative identified by the Contracting Officer.

(c) The "physical delivery" of the LEU to the Government shall be deemed to occur after receipt of the Contractor's certification to the Contracting Officer's Representative (COR) by Certified or Registered Mail, or by an acknowledged facsimile (which term, for this purpose, shall mean a facsimile that is acknowledged by the recipient) that the Derived LEU has been credited to the Government in the LEU account established in Article I, "Establishment of Government's LEU Account," of Section J attachment entitled, "Holding Agreement." The certification shall also include a copy of the Form DOE/NRC-741 and analytical data for the Derived LEU.

E002 RIGHTS OF INSPECTION (JAN 2007)

(a) In accordance with FAR Clause 52.246-4 "Inspection of Services - Fixed Price," the Contractor shall maintain and make available to the Government for inspection, upon reasonable notice, adequate records pertaining to the receipt, possession, transfer, or use of the HEU and LEU subject to this contract; and the Contractor shall permit inspection, sampling, and measurement of the material that is subject to this contract as the Government may require.

(b) If, based on the Contractor's analytical data or evaluation of the Government's analytical data, the Contractor determines that any portion of an HEU shipment cannot be down-blended, the Contractor shall notify the Government, in writing, within 45 days of its receipt of the analytical data that it is rejecting the HEU. The Government shall consider the Contractor's notification, and if the Government determines and agrees that the HEU is of a quality that when selectively down-blended with other higher quality HEU provided under this contract, will not result in a Derived LEU that will meet the specifications provided in Section J, attachment entitled, "Specification for LEU Derived from HEU," the HEU will be considered rejected. The Government will arrange for the transportation to return any rejected HEU to a designated facility.

ITEM	SUPPLIES SCHEDULE DATA	QTY		DATE
0001		1	48	MARO
	Noun:	RECEIPT, INVENTORY, PROCESSING, AND DOWN-BLENDING OF HEU TO LEU		
	ACRN:	U		
0002		1	108	MARO
	Noun:	STORAGE OF LEU AND PREPARATION FOR SHIPMENT OF UF_6		
	ACRN:	U		
0003		1	108	MARO
	Noun:	REPORTS		
	ACRN:	U		

I. NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.211-16	VARIATION IN QUANTITY (APR 1984) Para (b), Percent increase is '3 %' Para (b), Percent decrease is '3 %' Para (b), Designation(s) to which the percentages apply is 'the Derived LEU quantity taking into account that 1.5% may be lost during HEU processing and that there may be reasonable fluctuation of the enrichment of HEU delivered versus the HEU described in Section J attachment entitled, "Specification for LEU derived from HEU.'
52.242-15	STOP-WORK ORDER (AUG 1989)
52.242-17	GOVERNMENT DELAY OF WORK (APR 1984)
52.247-30	F.O.B. ORIGIN, CONTRACTOR'S FACILITY (FEB 2006)

II. NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

F001 PERIOD OF PERFORMANCE (FEB 2005) (TAILORED)

(a) Period of Performance for CLIN 0001, Receipt, Inventory, Processing, and Down-Blending of HEU to LEU:

The Contractor shall take delivery of approximately 12.1 MT of HEU in accordance with PWS and the schedule detailed in the Section J attachment entitled “Planned HEU Delivery Schedule.”

The Contractor shall have down-blended 40 MT of Derived LEU within two (2) years after delivery of HEU begins, as specified in the PWS and Holding Agreement.

All quantities of HEU provided to the Contractor shall be down-blended within one (1) year of final delivery of HEU to the Contractor as specified in the PWS.

(b) Period of Performance for CLIN 0002, Storage of LEU and Preparation for Shipment of UF_6:

The Contractor physically shall store and maintain 40 MT of Government owned LEU in the form of UF_6 and the Remainder LEU at the Contractor's storage facility for up to 9 years from execution of the contract as specified in the PWS and Holding Agreement.

Forty (40) MT of UF_6 from the Government LEU Account shall be available for shipment to the Government no later than two (2) years after initial HEU is provided to the Contractor for down-blending. Forty (40) MT of UF_6 from the Government LEU Account shall be provided to the Government within 30 days of receipt of written direction from the COR as specified in the PWS and Holding Agreement.

The Contractor shall have all LEU in the Government LEU Account available for Physical Delivery in the form of UF_6 within three (3) years after receipt of written direction from the Government, or on the last day of the contract period of performance, whichever is earlier, as specified in the PWS and Holding Agreement.

(c) Period of Performance for CLIN 0003, Reports

The Contractor shall provide applicable reports in accordance with Section J attachment entitled, "Reporting Requirements Checklist" concurrent with CLINs 0001 and 0002.

F002 PRINCIPAL PLACE OF PERFORMANCE (APR 2008)

The principal place of performance will be at the Contractor's facility(ies). The place of performance cannot be changed for the purposes of the Section I clause entitled, "FAR 52.243-1 Changes - Fixed Price" without the mutual agreement of the Parties. The principal place of performance will be: **TBD**

(Offeror to fill in location(s) of performance for down-blending and storage).

Down-blending:

_____

_____

_____

_____

Storage:

_____

_____

_____

_____

F003 DELIVERY OF HEU TO THE CONTRACTOR (APR 2008)

A detailed HEU shipment schedule shall be defined and agreed upon between the parties on a quarterly basis, however, the detailed schedule shall be consistent with Section J, Attachment entitled, "Planned HEU Delivery Schedule." In the event the Contractor is unable to receive or process HEU in accordance with such schedules, the Contractor shall immediately notify the CO of any resulting delay, request an alternate delivery or performance date, and identify any impacts to the processing caused by such a delay. Although the Government agrees to make a good faith effort to accommodate such requests, the Government is not bound to make accommodations.

Shipping will be done in accordance with Section 4.1 of the Performance Work Statement (see Section J, attachment entitled, "Performance Work Statement for 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory ").

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

G001 CORRESPONDENCE PROCEDURES (FEB 2005) (TAILORED)

In order to promote timely and effective administration, correspondence submitted under this contract shall contain a subject line commencing with the contract number, Contractor's name, and topic. If no Government Contract Administration Office is designated on the face page of this contract, all correspondence shall be subject to the following procedures:

(a) Technical Correspondence.

Technical correspondence (as used herein, excludes technical correspondence if patent or technical data issues are involved and correspondence that proposes or otherwise involves waivers, deviations, or modifications to the requirements, terms, or conditions, of this contract) shall be addressed to the COR with an information copy of the correspondence to the Contract Specialist. The point of contact for technical correspondence is:

COR: TBD.

(b) Other Correspondence.

Other than technical correspondence shall be addressed to the Contract Specialist with information copies of the correspondence to the COR and to the Patent Counsel (if patent or technical data issues are involved). The Contractor shall use the Contract Specialist as the focal point of contact. The Contract Specialist's name, address, phone number, fax number, and email address is as follows:

Contract Specialist: Leticia Y. Potts, United States Department of Energy, NNSA Service Center/OBS/FAD, PO. Box 5400, Albuquerque, NM 87185-5400, (505) 845-4371, facsimile (505) 284-7591, lpotts@doeal.gov.

(c) Patent Counsel

Correspondence pertaining to patent, technical data, or intellectual property shall be addressed to the Contract Specialist with information copies to the COR and the NNSA Patent Counsel as follows:

Not Applicable

(d) The Contracting Officer for this contract is:

Teresa M. Martinez, United States Department of Energy, NNSA Service Center/OBS/FAD, PO. Box 5400, Albuquerque, NM 87185-5400, (505) 845-4127, facsimile (505) 284-7369, TMartinez@doeal.gov.

G002 COMPENSATION (AUG 2008)

(a) As complete compensation for the services in Section B, CLINs 0001 and 0003, the Government will transfer title to a commensurate amount of Derived LEU. The value of the ordered services for CLIN 0001, including Diluent, are fixed at the time of award; however, the amount of compensatory Derived LEU transferred to the Contractor at the time of invoicing will fluctuate based on current market prices of the Derived LEU. The Government and Contractor, therefore, agree to utilize the methodology detailed below to determine the amount of compensatory Derived LEU transferred to the Contractor. The Contractor may invoice as frequently as every month. To request compensation, the

Contractor shall submit the documentation required in Section G Provision G004 entitled, "Billing Instructions."

(b) The equivalent quantity of Derived LEU to be transferred to the Contractor as compensation shall be calculated using the ratio as detailed in paragraph (e). below. The numerator represents the sum of the following three elements-the unit price for each HEU type (three HEU types, as provided in CLIN 0001, including Diluent costs) multiplied by the quantity of LEU produced from that material type during the billing period. The denominator represents the total market value of the Derived LEU. The market value of the Derived LEU is defined as the sum of the market value of the feed component and the market value of the Separative Work Unit (SWU) component. The feed component and the SWU component shall be calculated using a reference tails assay of 0.25% and a reference feed assay of 0.711%.

(c) The market value of the feed component shall be the arithmetic average of the following indices: 1) TradeTech's the Nuclear Market Review UF_6 Value, and 2) the Ux Consulting Company, LLC NA UF_6 Value, spot prices. The arithmetic average of these indices shall be based on the most recent, published indices for the month preceding the subject time period.

(d) The market value of the SWU component shall be the arithmetic average of the following indices: 1) the Nuclear Market Review (TradeTech) unrestricted spot SWU value, 2) the Nuclear Market Review (TradeTech) restricted spot SWU value, and 3) the Ux Consulting Company, LLC SWU spot price. The arithmetic average of these indices shall be based on the most recent published indices for the month preceding the subject time period.

(e) A mathematical representation of the text in Paragraphs (b), (c) and (d) follows:

$$Comp = \left(\frac{(\$A / kgU_{metal} \times kgU\ LEU_{metal}) + (\$B / kgU_{oxide} \times kgULEU_{oxide}) + (\$C / kgU_{fuel} \times kgU\ LEU_{fuel})}{\$P / kgU_{mkt}} \right)$$

where:

Comp = kgU LEU transferred to Contractor as compensation for billing period.

$\$A/kgU_{metal}$ = unit price per kgU of LEU derived from HEU metal as specified in Section B CLIN 0001 as applicable, paragraph (1).

LEU_{metal} = kgU of LEU derived from HEU metal during the billing period.

$\$B/kgU_{oxide}$ = unit price per kgU of LEU derived from HEU oxide and compounds as specified in Section B CLIN 0001 as applicable, paragraph (2).

LEU_{oxide} = kgU of LEU derived from HEU oxide and compounds during the billing period.

$\$C/kgU_{fuel}$ = unit price per kgU of LEU derived from HEU reactor fuel, sources, and standards as specified in Section B CLIN 0001 as applicable, paragraph (3).

LEU_{fuel} = kgU of LEU derived from HEU reactor fuel, sources, and standards during the billing period.

$\$P/kgU_{mkt}$ = LEU Market Price = Market Value of the Feed Component + Market Value of the SWU Component, as defined in paragraphs C and D above, and using 7.8 SWU and 10.2 KgU of UF_6 to produce 1 KgU of 4.95% LEU at 0.25% tails assay.

G003 CONSIDERATION (APR 2008)

As complete consideration for the CLINs 0002 and 0003 services in Section B, the Contractor may use the Government-owned LEU as working stock provided that a minimum of 40 MT of UF_6 is physically retained in storage in accordance with the Section J attachment entitled, "Holding Agreement."

G004 BILLING INSTRUCTIONS (AUG 2008)

(a) The following instructions are provided for submission of vouchers.

(b) The Contractor shall submit an invoice to the COR with a copy to the CO providing documentation on the type and quantity of material down-blended and a request to transfer title to the specified quantity of Derived LEU that is equivalent to the price of the recovery and down-blending services performed by the Contractor in accordance with the prices stipulated in CLIN 0001. The COR will provide notification of invoice approval to the Contractor with a copy to the CO, within 30 days of receipt of the invoice, until 98% of total Government Furnished HEU has been down-blended, delivered and accepted by the Government. Final payment for CLIN 0001 shall be made when all work under CLIN 0001 has been completed by the Contractor and accepted by the Government.

Contractor invoices for down-blending shall credit the Government's LEU Account by the quantity of LEU derived for the invoicing period less the compensation due to the Contractor, computed in accordance with the clause G002 "Compensation." Upon approval of the invoice the Government shall provide to the Contractor a DOE/NRC Form 741 form for the quantity of Derived LEU transferred to the Contractor as compensation. Any disagreements or discrepancies shall be brought to the attention of the CO for resolution. The CO is the only Government representative that can disapprove an invoice.

The final invoice submitted to the Government for the HEU processing and down-blending work under CLIN 0001 will be adjusted for the value of HEU lost in processing that exceeds the authorized process loss as stipulated in Section J, Attachment 1, paragraph 4.2.4. The actual processing loss will be reported by the Contractor in the “Final Down-blending Report.” The value of the HEU lost in processing that exceeds the authorized process loss will be determined using the same methodology used to determine the value of LEU prescribed in paragraphs C and D of Clause G002.

In the event that payments by the Government should exceed total compensation due the Contractor after adjustments are made for charges or credits, the Contractor shall reimburse the Government for any such overcompensation.

(c) At a minimum, each invoice shall include the following:

(1) Contract Number;
(2) Contractor Name;
(3) Date of Invoice;
(4) Invoice Number;
(5) Contract Line Item Number (CLIN)
(6) Quantity and type of HEU processed/down-blended;
(7) Quality certification report (analytical data) for Derived LEU generated;
(8) Copies of the market price indices as specified in Clause G002 used to calculate the equivalent quantity of LEU claimed as payment;
(9) Total amount of LEU claimed as payment;
(10) Cumulative amount invoiced to date by material type as specified in CLIN 0001;
(11) Copies of DOE/NRC Forms 741 that document the quantity and transfer of LEU to the Government; and
(12) Any other information required to support the invoice.

G005 DESIGNATION OF CONTRACTING OFFICER'S REPRESENTATIVES (SEP 2005) (TAILORED)

(a) The Contracting Officer's official delegation of authority shall be provided to the Contractor in writing. This delegation will describe the COR's authorities in detail. However, it is emphasized that only the Contracting Officer has the authority to modify the terms of the contract, therefore, in no event will any understanding, agreement, modification, change order, or other matter deviating from the terms of the basic contract between the Contractor and any other person be effective or binding on the Government. When/If, in the opinion of the Contractor, an effort outside the existing scope of the contract is requested, the Contractor shall promptly notify the Contracting Officer in writing. No action shall be taken by the Contractor unless the Contracting Officer has issued a written contractual change.

(b) The COR for this contract/order is/are identified below. If the effort under this contract requires that an Alternate COR is required in the absence of the COR named above, all responsibilities and functions assigned to the COR shall be the responsibility of the Alternate COR acting in behalf of the COR. The Contracting Officer hereby appoints the following individual(s) as the COR and Alternate COR(s):

COR: TBD

and

Alternate COR: TBD

NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

NNSA OTHER CONTRACT CLAUSES IN FULL TEXT

H000 LIST OF CLAUSES IN SECTION H (AUG 2008)

H001 CLAUSE AND PROVISION NUMBERING

H002 MODIFICATION AUTHORITY

H003 VARIATION IN QUANTITY

H004 TITLE TO SPECIAL NUCLEAR MATERIALS AND RESPONSIBILITY FOR THE DISPOSAL OF RESIDUES

H005 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS

H006 ENVIRONMENTAL LIABILITY

H007 CONTRACTOR'S PROGRAM MANAGER

H008 LAWS, REGULATIONS, DIRECTIVES, AND NNSA POLICY

H009 SECURITY REQUIREMENTS

H010 RECOVERY OF SPECIAL NUCLEAR MATERIALS

H011 OBSERVANCE OF NATIONAL HOLIDAYS

H012 SHIPPER/RECEIVER AGREEMENT (SRA)

H013 UMPIRE SAMPLE REQUIREMENTS

H015 RELEASE OF INFORMATION

H016 INDEMNIFICATION

H019 GOVERNMENT-FURNISHED PROPERTY (FIXED PRICE CONTRACTS)

H049 INSTRUCTIONS FOR UPDATING FOREIGN OWNERSHIP, CONTROL OR INFLUENCE (FOCI) INFORMATION

H001 CLAUSE AND PROVISION NUMBERING (FEB 2005)

The clauses and provisions in this document are in numerical order but may not be numbered sequentially.

H002 MODIFICATION AUTHORITY (JAN 2007)

Notwithstanding any of the other provisions of this Contract, the Contracting Officer shall be the only individual authorized to:

(a) accept nonconforming work,

(b) waive any requirement of this Contract, or
(c) modify any term or condition of this Contract.

H003 VARIATION IN QUANTITY (JUL 2008)

In accordance with FAR 52.211-16, "Variation in Quantity," a variation in the quantity of any item called for by this contract will not be accepted unless the variation has been caused by conditions of allowances in manufacturing processes or changes in the HEU material to be delivered in Section J attachment entitled, "HEU Material Summary," and then only to the extent, if any, specified in FAR 52.211-16, paragraph (b).

H004 TITLE TO SPECIAL NUCLEAR MATERIALS AND RESPONSIBILITY FOR THE DISPOSAL OF RESIDUES (JAN 2007)

This provision sets forth the requirements for the title to the Special Nuclear Materials (SNM), responsibilities, and disposal of residues.

(a) Title. The title to the delivered HEU, the Derived LEU (excluding the LEU transferred by the Government to the Contractor as compensation for its services), and the UF_6 converted or exchanged for the Derived LEU shall remain with the Government, except as authorized in the PWS for uranium that is lost in processing or remains in residues that cannot be recovered economically. Uranium lost in processing or that remains in residues that cannot be recovered economically as authorized in the PWS shall be deemed abandoned by the Government and title to such uranium and resulting wastes shall vest in the Contractor.

(b) Disposal of Residues and Waste. The Contractor shall be responsible for the disposal of all of the residues and waste resulting from the performance of this Contract. In effecting such disposal, the Contractor shall ensure that the operator of the disposal site has proper permits and licenses, takes all reasonable precautions, exercises that diligence and care that will ensure the maximum possible protection to the public and to the environment, and accepts all liability for proper disposal.

H005 COMPLIANCE WITH FEDERAL, STATE, AND LOCAL LAWS (JAN 2007)

The Contractor shall procure and maintain all of the necessary permits and licenses and abide by all applicable laws, regulations, ordinances, and requirements of the United States and of the State, territory, and political subdivision in which the work under this contract is performed.

H006 ENVIRONMENTAL LIABILITY (JAN 2007)

The Contractor shall be solely liable for the payment of all costs associated with the decontamination and decommissioning, and any response actions or corrective actions associated with the Contractor's property (including, but not limited to, existing facilities) used in the performance of this Contract.

H007 CONTRACTOR'S PROGRAM MANAGER (FEB 2005) (TAILORED)

(a) The Contractor shall designate a Program Manager who will be the Contractor's authorized supervisor for technical and administrative performance of all work hereunder. The Program Manager shall provide the single point of contact between the Contractor and the COR under this contract. All administrative support for technical personnel required to fulfill the work stated in the contract shall be the responsibility of the Contractor.

(b) The Program Manager shall receive and execute, on behalf of the Contractor, such technical directions as the COR may issue within the terms and conditions of the contract.

H008 LAWS, REGULATIONS, DIRECTIVES, AND NNSA POLICY (JUL 2008)

The Contractor shall procure all necessary permits and licenses required for work under this Contract and comply with all applicable Federal, State, and local laws, unless relief has been granted in writing by the appropriate regulatory agency. In performing work under this contract, the Contractor shall also comply with the requirements of those DOE Directives or NNSA Policies, or parts thereof, identified in Section J attachment entitled, "List of Applicable DOE Directives." The Contractor acknowledges that the Government may revise the List of Applicable DOE Directives by unilateral modification to this Contract to add, modify, or delete specific requirements. Prior to revising the List of Applicable DOE Directives, the Contracting Officer will notify the Contractor in writing of the Government's intent to revise the list and provide the Contractor with the opportunity to assess the effect of the Contractor's compliance with the revised list on contract compensation/consideration, technical performance, and schedule; and identify any potential inconsistencies between the revised list and the other terms and conditions of the contract. Within 30 days after receipt of the Contracting Officer's notice, the Contractor shall advise the Contracting Officer in writing of the potential impact of the Contractor's compliance with the revised list. Based on the information provided by the Contractor and any other information available, the Contracting Officer shall decide whether to revise the list and so advise the Contractor as soon as possible prior to the effective date of the revision of the list. The Contractor and Contracting Officer shall identify and, if appropriate, agree to any changes to other contract terms and conditions, including compensation/consideration and schedule, associated with the revision of the list pursuant to FAR clause 52.243-1 "Changes - Fixed Price, Alternate II."

H009 SECURITY REQUIREMENTS (JUL 2008)

All Contractor personnel assigned to perform work on HEU under this contract shall be US Citizens and may not retain dual citizenship status. Contractor personnel with access to Special Nuclear Material or certain information may be required to have a DOE "L" or DOE "Q" clearances in accordance with the Section J attachment entitled, "Contract Security Classification Specification, CSCS." The ability of Contractor foreign national personnel to perform work on LEU under this contract shall be governed by applicable Nuclear Regulatory Commission regulations.

H010 RECOVERY OF SPECIAL NUCLEAR MATERIALS (APR 2008)

The Contractor shall comply with the following conditions associated with Special Nuclear Materials (SNM), subject to this Contract which includes HEU that is provided to the Contractor by the Government and LEU generated by the Contractor and held on behalf of the Government.

(a) If, when this Contract is completed or terminated, the Contractor fails to return any Government owned SNM, the Government shall have the right to enter upon the Contractor's premises to recover or to take possession of the SNM and to charge to the Contractor the Government's full costs associated with such recovery or repossession.

(b) The Contractor shall submit to the COR a copy of the nuclear material transfer documents for each receipt, shipment, and SNM transfer with respect to the SNM material that is subject to this Contract.

(c) The Contractor shall be responsible for the prudent allocation of uranium to appropriate material management accounts specified by the COR on the DOE/NRC-741 transfer documents that are issued for all HEU and LEU delivered, stored for, and/or returned to the Government.

H011 OBSERVANCE OF NATIONAL HOLIDAYS (FEB 2005)

The Government observes the following days as national holidays:

(i) New Year's Day
(ii) Martin Luther King Day

(iii) President's Day
(iv) Memorial Day
(v) Independence Day
(vi) Labor Day
(vii) Columbus Day
(viii) Veteran's Day
(ix) Thanksgiving Day
(x) Christmas Day

Additionally, the Government will observe any other day designated by Federal statute, Executive Order, or Presidential proclamation.

H012 SHIPPER/RECEIVER AGREEMENT (SRA) (JAN 2007)

The Contractor(s) shall enter into a Shipper/Receiver Agreement (SRA) with the Government and the Government's designated shipping facility Contractor to document the methods used to establish materials control and accountability values for the nuclear materials provided under this contract.

(a) The SRA will be submitted to the appropriate signature authorities for the Contractor, the Government's designated shipping facility Contractor and DOE/NNSA, for approval, prior to initiating shipments. A copy of the SRA will be reviewed by the COR prior to approval. Copies of the approved SRA's will be maintained by the COR and CO.

(b) The SRA shall include the sampling plan, required analysis, and methodology for resolving measurement differences, including the use of umpire samples in accordance with the Section H clause H013 entitled, "Umpire Sample Requirements."

(c) The SRA shall include documentation of requirements for receipt and measurement of the shipping containers and inner or primary containers, and measurement methods for determination of the element and isotope uranium quantity in the nuclear material, including when measurements are taken.

(d) Accountability measurements shall be taken either at recovery processing (dissolution) or upon receipt. When official accountability measurements are taken at recovery processing (dissolution), the accountability measurement reconciliation will include associated process waste products. If official accountability measurements are taken upon receipt, the Government and the Government's designated shipping facility Contractor may request recovery measurements for comparison. The SRA shall also include requirements for retaining samples and resolution of shipper/receiver differences.

H013 UMPIRE SAMPLE REQUIREMENTS (JAN 2007)

The Contractor agrees to comply with the following procedures when umpire samples are required to resolve differences between the Government and the Contractor uranium and U-235 measurement. When a uranium and U-235 measurement difference can not be resolved, the CO shall provide direction and shipping instructions to the Contractor to promptly submit an umpire sample representing the Government furnished uranium or the derived uranium product on which there is an unresolved uranium and U-235 measurement difference to the New Brunswick Laboratory.

The results of the umpire sample analysis will determine the settlement as follows:

(a) The umpire analysis shall be conclusive and binding on both parties for resolution of a disagreement based on the uranium and the U-235 contents of the Government furnished uranium or the uranium product, if such results are within the range bounded by the Contractor result and the Government result.

(b) If the results of the umpire analysis are outside of the range bounded by the Contractor result and the Government result, the parties shall accept the result of the party nearer to the result of the umpire.

(c) Failure to reach agreement under H013 shall be resolved in accordance with FAR clause 52.233-1 "Disputes - Alternate I."

H015 RELEASE OF INFORMATION (FEB 2005) (TAILORED)

(a) The Contractor shall not make public release of any information related to all or any part of this Contract without prior approval of the Contracting Officer.

(b) For the purposes of this clause, "information" includes but is not limited to news releases, articles, manuscripts, brochures, advertisements, still and motion pictures, speeches, trade association and symposia presentation material, published professional papers, etc.

(c) The Contractor shall submit three (3) copies of any information thirty (30) days prior to desired release date for security and policy review/clearance.

(d) The Contractor agrees to flowdown this provision in any teaming arrangement or subcontract entered into as a result of this contract.

H016 INDEMNIFICATION (MAR 2007)

Except as provided in I. Clause 952.250-70 NUCLEAR HAZARDS INDEMNITY AGREEMENT (JUN 1996) with respect to nuclear incidents as defined in Section 11 of the Atomic Energy Act of 1954, as amended, the Contractor agrees to indemnify and hold harmless the Government, its employees, agents, and representatives, from and against any and all liabilities, penalties, fines, forfeitures, demands, claims, causes of action, suits and costs and expenses (including the costs of defense and/or settlement, including, but not limited to, actual attorney's fees), whether vested or contingent, liquidated or unliquidated, which any or all of the above may hereafter at any time suffer, incur, be subject to, be responsible for, or pay as a result of any and all bodily injuries to persons (including death), damage to any property, contamination or other adverse effects on the environment, or any violation or alleged violation of any or all applicable statutes, ordinances, orders, laws, rules, or regulations of any governmental entity or agency, caused by, resulting from, or arising out of (1) any negligent or willful act or omissions by the Contractor, its employees, agents, officers, directors, or subcontractors in connection with this Contract or (2) the Contractor's use, distribution, sales, or alteration of the HEU or LEU identified in this Contract or any components or residue thereof.

H019 GOVERNMENT-FURNISHED PROPERTY (JUN 2007)

In accordance with FAR 52.245-1, "Government Property - Alternate I," the property listed in Section J attachment entitled, "HEU Material Summary" and associated containers, is provided for use in the performance of this contract.

H049 INSTRUCTIONS FOR UPDATING FOREIGN OWNERSHIP, CONTROL OR INFLUENCE (FOCI) INFORMATION (MAY 2007) (TAILORED)

(a) In order to submit periodic updates or to report changes to Foreign Ownership, Control or Influence information as required by DEAR 952.204-2, Security, the Contractor shall use the DOE FOCI electronic submission system located at https://foci.td.anl.gov/.

(b) New users, when registering to update information under this contract, should select "NNSA Service Center Procurement/Purchasing" as the FOCI Office that will review the FOCI Submission.

(c) Electronic signatures are not accepted; therefore, signed originals of any documents requiring signatures to include the SF 328, 'Certificate Pertaining to Foreign Interests', executed in accordance with the instructions on the certification section of the SF 328, shall be submitted to the Contracting Officer.

I. NOTICE: The following contract clauses pertinent to this section are hereby incorporated by reference:

A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES

52.203-3	GRATUITIES (APR 1984)
52.203-5	COVENANT AGAINST CONTINGENT FEES (APR 1984)
52.203-6	RESTRICTIONS ON SUBCONTRACTOR SALES TO THE GOVERNMENT (SEP 2006)
52.203-7	ANTI-KICKBACK PROCEDURES (JUL 1995)
52.203-8	CANCELLATION, RESCISSION, AND RECOVERY OF FUNDS FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
52.203-10	PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (JAN 1997)
52.203-12	LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS (SEP 2007)
52.203-13	CONTRACTOR CODE OF BUSINESS ETHICS AND CONDUCT (DEC 2007)
52.203-14	DISPLAY OF HOTLINE POSTER(S) (DEC 2007)
52.204-4	PRINTED OR COPIED DOUBLE-SIDED ON RECYCLED PAPER (AUG 2000)
52.204-7	CENTRAL CONTRACTOR REGISTRATION (APR 2008)
52.209-6	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT (SEP 2006)
52.215-2	AUDIT AND RECORDS -- NEGOTIATION (JUN 1999)
52.215-8	ORDER OF PRECEDENCE--UNIFORM CONTRACT FORMAT (OCT 1997)
52.215-14	INTEGRITY OF UNIT PRICES (OCT 1997) - ALTERNATE I (OCT 1997)
52.215-15	PENSION ADJUSTMENTS AND ASSET REVERSIONS (OCT 2004)
52.219-4	NOTICE OF PRICE EVALUATION PREFERENCE FOR HUBZONE SMALL BUSINESS CONCERNS (JUL 2005)
52.219-8	UTILIZATION OF SMALL BUSINESS CONCERNS (MAY 2004)
52.222-1	NOTICE TO THE GOVERNMENT OF LABOR DISPUTES (FEB 1997)
52.222-3	CONVICT LABOR (JUN 2003)
52.222-4	CONTRACT WORK HOURS AND SAFETY STANDARDS ACT -- OVERTIME COMPENSATION (JUL 2005)
52.222-19	CHILD LABOR--COOPERATION WITH AUTHORITIES AND REMEDIES (FEB 2008)
52.222-21	PROHIBITION OF SEGREGATED FACILITIES (FEB 1999)
52.222-26	EQUAL OPPORTUNITY (MAR 2007)
52.222-35	EQUAL OPPORTUNITY FOR SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-36	AFFIRMATIVE ACTION FOR WORKERS WITH DISABILITIES (JUN 1998)
52.222-37	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS, VETERANS OF THE VIETNAM ERA, AND OTHER ELIGIBLE VETERANS (SEP 2006)
52.222-50	COMBATING TRAFFICKING IN PERSONS (AUG 2007)
52.223-3	HAZARDOUS MATERIAL IDENTIFICATION AND MATERIAL SAFETY DATA (JAN 1997) - ALTERNATE I (JUL 1995) Para (b), Material Identification No: 'To be filled-in by Offeror'
52.223-6	DRUG-FREE WORKPLACE (MAY 2001)
52.223-14	TOXIC CHEMICAL RELEASE REPORTING (AUG 2003)
52.225-1	BUY AMERICAN ACT--SUPPLIES (JUN 2003)
52.225-13	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES (JUN 2008)
52.227-1	AUTHORIZATION AND CONSENT (DEC 2007)
52.227-2	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT (DEC 2007)
52.227-14	RIGHTS IN DATA -- GENERAL (DEC 2007) - ALTERNATE I (DEC 2007)
52.229-3	FEDERAL, STATE, AND LOCAL TAXES (APR 2003)
52.232-8	DISCOUNTS FOR PROMPT PAYMENT (FEB 2002)

52.232-11	EXTRAS (APR 1984)
52.232-24	PROHIBITION OF ASSIGNMENT OF CLAIMS (JAN 1986)
52.233-1	DISPUTES (JUL 2002) - ALTERNATE I (DEC 1991)
52.233-3	PROTEST AFTER AWARD (AUG 1996)
52.233-4	APPLICABLE LAW FOR BREACH OF CONTRACT CLAIM (OCT 2004)
52.242-2	PRODUCTION PROGRESS REPORTS (APR 1991)
52.242-13	BANKRUPTCY (JUL 1995)
52.243-1	CHANGES -- FIXED-PRICE (AUG 1987) - ALTERNATE II (APR 1984)
52.243-7	NOTIFICATION OF CHANGES (APR 1984) Para (b), Number of calendar days is (insert 30 for RDSS/C) '30 days' Para (d), Number of calendar days is (insert 30 for RDSS/C) '30 days'
52.244-6	SUBCONTRACTS FOR COMMERCIAL ITEMS (MAR 2007)
52.245-1	GOVERNMENT PROPERTY (JUN 2007) - ALTERNATE I (JUN 2007)
52.245-9	USE AND CHARGES (JUN 2007)
52.249-2	TERMINATION FOR CONVENIENCE OF THE GOVERNMENT (FIXED-PRICE) (MAY 2004)
52.249-8	DEFAULT (FIXED-PRICE SUPPLY AND SERVICE) (APR 1984)
52.253-1	COMPUTER GENERATED FORMS (JAN 1991)

B. DEPARTMENT OF ENERGY ACQUISITION REGULATION CONTRACT CLAUSES

952.204-70	CLASSIFICATION/DECLASSIFICATION (SEP 1997)
952.226-74	DISPLACED EMPLOYEE HIRING PREFERENCE (JUN 1997)
952.250-70	NUCLEAR HAZARDS INDEMNITY AGREEMENT (JUN 1996)

II. NOTICE: The following contract clauses pertinent to this section are hereby incorporated in full text:

A. FEDERAL ACQUISITION REGULATION CONTRACT CLAUSES IN FULL TEXT

52.202-1 DEFINITIONS (DEVIATION) (JUL 2004)

(a) When a solicitation provision or contract clause uses a word or term that is defined in the Federal Acquisition Regulation (FAR), the word or term has the same meaning as the definition in FAR 2.101 in effect at the time the solicitation was issued, unless-

(1) The solicitation, or amended solicitation, provides a different definition;

(2) The contracting parties agree to a different definition;

(3) The part, subpart, or section of the FAR where the provision or clause is prescribed provides a different meaning; or

(4) The word or term is defined in FAR Part 31, for use in the cost principles and procedures.

(b) The FAR Index is a guide to words and terms the FAR defines and shows where each definition is located. The FAR Index is available via the Internet at http://www.acqnet.gov at the end of the FAR, after the FAR Appendix.

(c) “Agency head” or “head of agency” means the Secretary, Deputy Secretary, or the Under Secretary and Administrator for National Nuclear Security Administration of the Department of Energy. “Senior Procurement Executive” means, the individuals who are responsible for management direction of the acquisition system of NNSA, including implementation of the unique acquisition policies, regulations,

and standards of NNSA. For NNSA, it is the Administrator for Nuclear Security and the Director, Acquisition and Supply Management.

52.215-19 NOTIFICATION OF OWNERSHIP CHANGES (OCT 1997)

(a) The Contractor shall make the following notifications in writing:

(1) When the Contractor becomes aware that a change in its ownership has occurred, or is certain to occur, that could result in changes in the valuation of its capitalized assets in the accounting records, the Contractor shall notify the Administrative Contracting Officer (ACO) within 30 days.

(2) The Contractor shall also notify the ACO within 30 days whenever changes to asset valuations or any other cost changes have occurred or are certain to occur as a result of a change in ownership.

(b) The Contractor shall--

(1) Maintain current, accurate, and complete inventory records of assets and their costs;

(2) Provide the ACO or designated representative ready access to the records upon request;

(3) Ensure that all individual and grouped assets, their capitalized values, accumulated depreciation or amortization, and remaining useful lives are identified accurately before and after each of the Contractor's ownership changes; and

(4) Retain and continue to maintain depreciation and amortization schedules based on the asset records maintained before each Contractor ownership change.

(c) The Contractor shall include the substance of this clause in all subcontracts under this contract that meet the applicability requirement of FAR 15.408(k).

52.219-28 POST-AWARD SMALL BUSINESS PROGRAM REREPRESENTATION (JUN 2007)

(a) Definitions. As used in this clause--

"Long-term contract" means a contract of more than five years in duration, including options. However, the term does not include contracts that exceed five years in duration because the period of performance has been extended for a cumulative period not to exceed six months under the clause at 52.217-8, Option to Extend Services, or other appropriate authority.

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR part 121 and the size standard in paragraph (c) of this clause.

(b) If the Contractor represented that it was a small business concern prior to award of this contract, the Contractor shall rerepresent its size status according to paragraph (e) of this clause or, if applicable, paragraph (g) of this clause, upon the occurrence of any of the following:

(1) Within 30 days after execution of a novation agreement or within 30 days after modification of the contract to include this clause, if the novation agreement was executed prior to inclusion of this clause in the contract.

(2) Within 30 days after a merger or acquisition that does not require a novation or within 30 days after modification of the contract to include this clause, if the merger or acquisition occurred prior to inclusion of this clause in the contract.

(3) For long-term contracts--

(i) Within 60 to 120 days prior to the end of the fifth year of the contract; and

(ii) Within 60 to 120 days prior to the exercise date specified in the contract for any option thereafter.

(c) The Contractor shall rerepresent its size status in accordance with the size standard in effect at the time of this rerepresentation that corresponds to the North American Industry Classification System (NAICS) code assigned to this contract. The small business size standard corresponding to this NAICS code can be found at http://www.sba.gov/services/contractingopportunities/sizestandardstopics/

(d) The small business size standard for a Contractor providing a product which it does not manufacture itself, for a contract other than a construction or service contract, is 500 employees.

(e) Except as provided in paragraph (g) of this clause, the Contractor shall make the rerepresentation required by paragraph (b) of this clause by validating or updating all its representations in the Online Representations and Certifications Application and its data in the Central Contractor Registration, as necessary, to ensure they reflect current status. The Contractor shall notify the contracting office by e-mail, or otherwise in writing, that the data have been validated or updated, and provide the date of the validation or update.

(f) If the Contractor represented that it was other than a small business concern prior to award of this contract, the Contractor may, but is not required to, take the actions required by paragraphs (e) or (g) of this clause.

(g) If the Contractor does not have representations and certifications in ORCA, or does not have a representation in ORCA for the NAICS code applicable to this contract, the Contractor is required to complete the following rerepresentation and submit it to the contracting office, along with the contract number and the date on which the rerepresentation was completed:

The Contractor represents that it [ ] is, [ ] is not a small business concern under NAICS Code ---------- assigned to contract number ----------.

[Contractor to sign and date and insert authorized signer's name and title].

52.222-39 NOTIFICATION OF EMPLOYEE RIGHTS CONCERNING PAYMENT OF UNION DUES OR FEES (DEC 2004) (TAILORED)

(a) Definition. As used in this clause--

"United States" means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, American Samoa, Guam, the U.S. Virgin Islands, and Wake Island.

(b) Except as provided in paragraph (e) of this clause, during the term of this contract, the Contractor shall post a notice, in the form of a poster, informing employees of their rights concerning union membership and payment of union dues and fees, in conspicuous places in and about all its plants and offices, including all places where notices to employees are customarily posted. The notice shall include the following information (except that the information pertaining to National Labor Relations Board shall not be included in notices posted in the plants or offices of carriers subject to the Railway Labor Act, as amended (45 U.S.C. 151-188)).

Notice to Employees

Under Federal law, employees cannot be required to join a union or maintain membership in a union in order to retain their jobs. Under certain conditions, the law permits a union and an employer to enter into a union-security agreement requiring employees to pay uniform periodic dues and initiation fees. However, employees who are not union members can object to the use of their payments for certain purposes and can only be required to pay their share of union costs relating to collective bargaining, contract administration, and grievance adjustment.

If you do not want to pay that portion of dues or fees used to support activities not related to collective bargaining, contract administration, or grievance adjustment, you are entitled to an appropriate reduction in your payment. If you believe that you have been required to pay dues or fees used in part to support activities not related to collective bargaining, contract administration, or grievance adjustment, you may be entitled to a refund and to an appropriate reduction in future payments.

For further information concerning your rights, you may wish to contact the National Labor Relations Board (NLRB) either at one of its Regional offices or at the following address or toll free number:

National Labor Relations Board
Division of Information
1099 14th Street, N.W.
Washington, DC 20570
1-866-667-6572
1-866-316-6572 (TTY)

To locate the nearest NLRB office, see NLRB's website at http://www.nlrb.gov.

(c) The Contractor shall comply with all provisions of Executive Order 13201 of February 17, 2001, and related implementing regulations at 29 CFR Part 470, and orders of the Secretary of Labor.

(d) In the event that the Contractor does not comply with any of the requirements set forth in paragraphs (b), (c), or (g), the Secretary may direct that this contract be cancelled, terminated, or suspended in whole or in part, and declare the Contractor ineligible for further Government contracts in accordance with procedures at 29 CFR part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures. Such other sanctions or remedies may be imposed as are provided by 29 CFR Part 470, which implements Executive Order 13201, or as are otherwise provided by law.

(e) The requirement to post the employee notice in paragraph (b) does not apply to--

(1) Contractors and subcontractors that employ fewer than 15 persons;

(2) Contractor establishments or construction work sites where no union has been formally recognized by the Contractor or certified as the exclusive bargaining representative of the Contractor's employees;

(3) Contractor establishments or construction work sites located in a jurisdiction named in the definition of the United States in which the law of that jurisdiction forbids enforcement of union-security agreements;

(4) Contractor facilities where upon the written request of the Contractor, the Department of Labor Deputy Assistant Secretary for Labor-Management Programs has waived the posting requirements with respect to any of the Contractor's facilities if the Deputy Assistant Secretary finds that the Contractor has demonstrated that--

(i) The facility is in all respects separate and distinct from activities of the Contractor related to the performance of a contract; and

(ii) Such a waiver will not interfere with or impede the effectuation of the Executive order; or

(5) Work outside the United States that does not involve the recruitment or employment of workers within the United States.

(f) The Department of Labor publishes the official employee notice in two variations; one for contractors covered by the Railway Labor Act and a second for all other contractors. The Contractor shall--

(1) Obtain the required employee notice poster from the Division of Interpretations and Standards, Office of Labor-Management Standards, U.S. Department of Labor, 200 Constitution Avenue, NW, Room N-5605, Washington, DC 20210, or from any field office of the Department's Office of Labor-Management Standards or Office of Federal Contract Compliance Programs;

(2) Download a copy of the poster from the Office of Labor-Management Standards website at http://www.dol.gov/esa/olms/regs/compliance/posterpg.htm; or

(3) Reproduce and use exact duplicate copies of the Department of Labor's official poster.

(g) The Contractor shall include the substance of this clause in every subcontract or purchase order that exceeds the simplified acquisition threshold, entered into in connection with this contract, unless exempted by the Department of Labor Deputy Assistant Secretary for Labor-Management Programs on account of special circumstances in the national interest under authority of 29 CFR 470.3(c). For indefinite quantity subcontracts, the Contractor shall include the substance of this clause if the value of orders in any calendar year of the subcontract is expected to exceed the simplified acquisition threshold. Pursuant to 29 CFR Part 470, Subpart B--Compliance Evaluations, Complaint Investigations and Enforcement Procedures, the Secretary of Labor may direct the Contractor to take such action in the enforcement of these regulations, including the imposition of sanctions for noncompliance with respect to any such subcontract or purchase order. If the Contractor becomes involved in litigation with a subcontractor or vendor, or is threatened with such involvement, as a result of such direction, the Contractor may request the United States, through the Secretary of Labor, to enter into such litigation to protect the interests of the United States.

52.252-2 CLAUSES INCORPORATED BY REFERENCE (FEB 1998) (TAILORED)

This contract incorporates one or more clauses by reference with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this/these address(es): http://farsite.hill.af.mil/ or http://www.arnet.gov/far/.

52.252-6 AUTHORIZED DEVIATIONS IN CLAUSES (APR 1984)

(a) The use in this solicitation or contract of any Federal Acquisition Regulation (48 CFR Chapter 1) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the date of the clause.

(b) The use in this solicitation or contract of any Department of Energy Acquisition Regulation (48 CFR Chapter 9) clause with an authorized deviation is indicated by the addition of "(DEVIATION)" after the name of the regulation.

B. DEPARTMENT OF ENERGY ACQUISITION REGULATION CONTRACT CLAUSES

952.204-2 SECURITY (DEVIATION) (MAY 2002)

(a) Responsibility. It is the Contractor's duty to safeguard all classified information, special nuclear material, and other DOE property. The Contractor shall, in accordance with DOE security regulations and requirements, be responsible for safeguarding all classified information and protecting against sabotage, espionage, loss or theft of the classified documents and material in the Contractor's possession in connection with the performance of work under this contract. Except as otherwise expressly provided in this contract, the Contractor shall, upon completion or termination of this contract, transmit to DOE any classified matter in the possession of the Contractor or any person under the Contractor's control in connection with performance of this contract. If retention by the Contractor of any classified matter is required after the completion or termination of the contract, the Contractor shall identify the items and types or categories of matter proposed for retention, the reasons for the retention of the matter, and the proposed period of retention. If the retention is approved by the Contracting Officer, the security provisions of the contract shall continue to be applicable to the matter retained. Special nuclear material shall not be retained after the completion or termination of the contract.

(b) Regulations. The Contractor agrees to comply with all security regulations and requirements of DOE as incorporated into the contract.

(c) Definition of classified information. The term "classified information" means Restricted Data, Formerly Restricted Data, or National Security Information.

(d) Definition of restricted data. The term "Restricted Data" means all data concerning

(1) design, manufacture, or utilization of atomic weapons;

(2) the production of special nuclear material; or

(3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Atomic Energy Act of 1954, as amended.

(e) Definition of formerly restricted data. The term "Formerly Restricted Data" means all data removed from the Restricted Data category under section 142 d. of the Atomic Energy Act of 1954, as amended.

(f) Definition of National Security Information. The term "National Security Information" means any information or material, regardless of its physical form or characteristics, that is owned by, produced for or by, or is under the control of the United States Government, that has been determined pursuant to Executive Order 12958 or prior Orders to require protection against unauthorized disclosure, and which is so designated.

(g) Definition of Special Nuclear Material (SNM). SNM means:

(1) plutonium, uranium enriched in the isotope 233 or in the isotope 235, and any other material which pursuant to the provisions of Section 51 of the Atomic Energy Act of 1954, as amended, has been determined to be special nuclear material, but does not include source material; or

(2) any material artificially enriched by any of the foregoing, but does not include source material.

(h) Security clearance of personnel. The Contractor shall not permit any individual to have access to any classified information, except in accordance with the Atomic Energy Act of 1954, as

amended, Executive Order 12958, and the DOE's regulations or requirements applicable to the particular level and category of classified information to which access is required.

(i) Criminal liability. It is understood that disclosure of any classified information relating to the work or services ordered hereunder to any person not entitled to receive it, or failure to safeguard any classified information that may come to the Contractor or any person under the Contractor's control in connection with work under this contract, may subject the Contractor, its agents, employees, or subcontractors to criminal liability under the laws of the United States. (See the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.; 18 U.S.C. 793 and 794; and E.O. 12958.)

(j) Foreign Ownership, Control or Influence.

(1) The Contractor shall immediately provide the cognizant security office written notice of any change in the extent and nature of foreign ownership, control or influence over the Contractor which would affect any answer to the questions presented in the Certificate Pertaining to Foreign Interests, Standard Form 328 or the Foreign Ownership, Control or Influence questionnaire executed by the Contractor prior to the award of this contract. In addition, any notice of changes in ownership or control which are required to be reported to the Securities and Exchange Commission, the Federal Trade Commission, or the Department of Justice shall also be furnished concurrently to the Contracting Officer.

(2) If a Contractor has changes involving foreign ownership, control or influence, DOE must determine whether the changes will pose an undue risk to the common defense and security. In making this determination, DOE will consider proposals made by the Contractor to avoid or mitigate foreign influences.

(3) If the cognizant security office at any time determines that the Contractor is, or is potentially, subject to foreign ownership, control or influence, the Contractor shall comply with such instructions as the Contracting Officer shall provide in writing to safeguard any classified information or special nuclear material.

(4) The Contractor agrees to insert terms that conform substantially to the language of this clause, including this paragraph, in all subcontracts under this contract that will require subcontractor employees to possess access authorizations. Additionally, the Contractor must require subcontractors to have an existing DOD or DOE Facility Clearance or submit a completed Certificate Pertaining to Foreign Interests, Standard Form 328, required in DEAR 952.204-73 prior to award of a subcontract. Information to be provided by a subcontractor pursuant to this clause may be submitted directly to the Contracting Officer. For purposes of this clause, subcontractor means any subcontractor at any tier and the term "Contracting Officer" means the DOE Contracting Officer. When this clause is included in a subcontract, the term "Contractor" shall mean Subcontractor and the term "contract" shall mean subcontract.

(5) The Contracting Officer may terminate this contract for default either if the Contractor fails to meet obligations imposed by this clause or if the Contractor creates a FOCI situation in order to avoid performance or a termination for default. The Contracting Officer may terminate this contract for convenience if the Contractor becomes subject to FOCI and for reasons other than avoidance of performance of the contract, cannot, or chooses not to, avoid or mitigate the FOCI problem.

952.242-70 TECHNICAL DIRECTION (DEC 2000) (TAILORED)

(a) Performance of the work under this contract shall be subject to the technical direction of the DOE Contracting Officer's Representative (COR). The term "technical direction" is defined to include, without limitation:

(1) Providing direction to the Contractor that redirects contract effort, shift work emphasis between work areas or tasks, require pursuit of certain lines of inquiry, fill in details, or otherwise serve to accomplish the contractual PWS.

(2) Providing written information to the Contractor that assists in interpreting drawings, specifications, or technical portions of the work description.

(3) Reviewing and, where required by the contract, approving, technical reports, drawings, specifications, and technical information to be delivered by the Contractor to the Government.

(b) The Contractor will receive a copy of the written COR designation from the contracting officer. It will specify the extent of the COR's authority to act on behalf of the contracting officer.

(c) Technical direction must be within the scope of work stated in the contract. The COR does not have the authority to, and may not, issue any technical direction that:

(1) Constitutes an assignment of additional work outside the PWS;

(2) Constitutes a change as defined in the contract clause entitled "Changes;"

(3) In any manner causes an increase or decrease in the total estimated contract cost, the fee (if any), or the time required for contract performance;

(4) Changes any of the expressed terms, conditions or specifications of the contract; or

(5) Interferes with the Contractor's right to perform the terms and conditions of the contract.

(d) All technical direction shall be issued in writing by the COR.

(e) The Contractor must proceed promptly with the performance of technical direction duly issued by the COR in the manner prescribed by this clause and within its authority under the provisions of this clause. If, in the opinion of the Contractor, any instruction or direction by the COR falls within one of the categories defined in (c)(1) through (c)(5) of this clause, the Contractor must not proceed and must notify the Contracting Officer in writing within five (5) working days after receipt of any such instruction or direction and must request the Contracting Officer to modify the contract accordingly. Upon receiving the notification from the Contractor, the Contracting Officer must:

(1) Advise the Contractor in writing within thirty (30) days after receipt of the Contractor's letter that the technical direction is within the scope of the contract effort and does not constitute a change under the Changes clause of the contract;

(2) Advise the Contractor in writing within a reasonable time that the Government will issue a written change order; or

(3) Advise the Contractor in writing within a reasonable time not to proceed with the instruction or direction of the COR.

(f) A failure of the Contractor and Contracting Officer either to agree that the technical direction is within the scope of the contract or to agree upon the contract action to be taken with respect to the technical direction will be subject to the provisions of the clause entitled "Disputes."

DOCUMENT	PGS	DATE	TITLE
ATTACHMENT 1	7	03 DEC 2008	PERFORMANCE WORK STATEMENT FOR 12.1 MT HIGHLY ENRICHED URANIUM - DOWN-BLENDING SERVICES AND LOW ENRICHED URANIUM INVENTORY
ATTACHMENT 2	3	02 DEC 2008	HOLDING AGREEMENT
ATTACHMENT 3	3	26 SEP 2008	REPORTING REQUIREMENTS CHECKLIST
ATTACHMENT 4	108	26 NOV 2008	HEU MATERIAL SUMMARY
ATTACHMENT 5	2	09 JAN 2008	SPECIFICATION FOR LEU DERIVED FROM HEU
ATTACHMENT 6	2	13 NOV 2008	PLANNED HEU DELIVERY SCHEDULE
ATTACHMENT 7	1	01 MAY 2008	LIST OF APPLICABLE DOE DIRECTIVES
ATTACHMENT 8	3	02 DEC 2008	DEFINITIONS
ATTACHMENT 9	3		CSCS FORM

Performance Work Statement
For
12.1 MT Highly Enriched Uranium – Down-blending Services and Low Enriched Uranium Inventory
(December 3, 2008)

1.0 BACKGROUND

The Highly Enriched Uranium (HEU) Disposition Program is currently responsible for disposing of 217 metric tons (MT) of HEU, as follows:

In 1994, the President declared 174 MT of HEU to be excess to national security. In 1996, after conducting appropriate NEPA analysis, DOE issued a Record of Decision that announced the material would be down-blended to low-enriched uranium (LEU) to make it non-weapons-usable, and subsequently used as nuclear reactor fuel to the extent practicable. Of this total, 156 MT can be down-blended for this use. The remaining 18 MT are spent nuclear fuel and low equity discards that are not planned to be recovered.

In 2005, the Department also declared that an additional 200 MT of HEU will never again be used as fissile material in nuclear weapons. Of that amount, 160 MT was designated for use as Naval Reactor fuel, 20 MT was designated for research and space reactor requirements, and 20 MT was designated for down-blending to LEU. In addition to the 20 MT designated for down-blending, it is expected based on historical experience that Naval Reactors will reject approximately 20 percent of its 160 MT allotment. As a result, it is expected that the HEU Disposition Program will need to down-blend an estimated additional 32 MT. This amount can change if NR rejects more or less than has historically been the case.

The program has already committed to various down-blending projects 161 MT of the 217 MT of HEU for which it is responsible, and has eliminated approximately 102 MT of weapons-usable HEU by down-blending it to LEU for use in power and research reactors in the U.S. and abroad. Another 15 MT of HEU has been shipped to the down-blender for processing; therefore, the program has effectively disposed of approximately 117 MT of surplus HEU to date. The program has substantially reduced holdings of fissile materials throughout the Department of Energy complex, rid the world of approximately 2,450 weapons worth of unneeded bomb material, helped reduce civil use of HEU worldwide by providing replacement LEU fuel for research reactors that previously used HEU fuel, and made a significant contribution to electricity supplies. The program is moving forward with plans for the remaining 56 MT of HEU that is currently unallocated to any project.

2.0 CONTRACT OVERVIEW

The overall objectives of the procurement are to meet non-proliferation objectives by down-blending approximately 12.1 MT of HEU below 5% enrichment, reduce the inventory of HEU, reduce the costs associated with storing and securing HEU, and recover the value of the HEU where feasible.

3.0 PROGRAM SCOPE

3.1 The Contractor shall receive 12.1 MT of HEU from alloyed and unalloyed metals, oxides, compounds, sources and standards, and reactor fuel, chemically process the HEU to prepare it for down-blending, procure necessary diluent, and down-blend the HEU into Derived LEU. All HEU provided to the Contractor shall be down-blended and available for shipment to the Government as specified in the PWS and with the Section J attachment entitled, "Holding Agreement".

3.2 The Contractor shall store the Derived LEU in a Government account and ship to the Government, as requested, in accordance with the Holding Agreement.

4.0 TECHNICAL REQUIREMENTS

4.1 Receipt, Inventory of HEU, and Return of Shipping Containers

4.1.1 The Contractor shall take delivery of approximately 12.1 MT of HEU in accordance with the schedule detailed in the Section J attachment entitled "Planned HEU Delivery Schedule." The 12.1 MT consists of HEU Alloyed and Unalloyed Metal, HEU Oxide and Compounds, HEU Reactor Fuel and Sources and Standards as specified in Section J attachment entitled, "HEU Material Summary."

4.1.1.1 Unless otherwise agreed to by the Government and the Contractor, HEU material delivered to the Contractor will meet the description provided in the Section J, attachment entitled "HEU Material Summary."

4.1.1.2 The Government will provide the Contractor an analysis of the isotopic and chemical properties of HEU prior to any HEU shipment to the Contractor. At a minimum, the following information shall be provided in the Government analysis:

(i) Level of all uranium isotopes ($\mu g/g^{235}U$);
(ii) ^{99}Tc levels ($\mu g/g^{235}U$);
(iii) Alpha activity from Neptunium and Plutonium (Bq/gU);
(iv) Gamma activity from fission products for each detectable gamma emitting fission product. The values obtained by multiplying the activity (Bq/gU) of each parent nuclide species by the appropriate mean gamma energy per disintegration (MeV/d) shall be summed (MeV Bq/dkgU). The presence of all identified gamma emitting fission product nuclides will be recorded and each contribution included in the total; and
(v) Agreed upon elemental impurities.

4.1.1.3 Prior to HEU shipment, the Contractor and the Government will agree on additional sampling needed for material characterization and/or to be used to determine the suitability of the HEU for down-blending into commercially acceptable LEU.

4.1.1.4 The Government will provide the opportunity to the Contractor to observe the sampling or loading of HEU, if requested. The Contractor shall only request access for personnel meeting site requirements, including but not limited to security clearances and

other training. If the Contractor requests an opportunity to observe sampling or loading, the Government will notify the Contractor of the date(s) and place(s) for observance of such events.

4.1.1.5 The Contractor shall process uranium samples once released by the Government or, as instructed by the Government, shall return the samples to the designated Government facility.

4.1.1.6 If the HEU material delivered by Government to the Contractor fails to conform to the specifications set forth in the Section J, attachment entitled "HEU Material Summary," and the Contractor cannot utilize the material through selective blending with conforming HEU, the Government may elect to replace such non-conforming HEU with conforming HEU or may reduce the quantity of HEU to be delivered under this contract. Such a change will be processed in accordance with FAR clause 52.243-01 "Changes – Fixed Price – Alternate II." The Government will arrange for the removal of any non-conforming HEU. The Contractor shall submit a written notice of non-conformance to the CO no later than forty-five (45) calendar days after receipt of the analytical data. The notice of non-conformance shall include analytical data supporting the Contractor's assessment.

4.1.1.7 A detailed HEU shipment schedule shall be defined and agreed upon between the parties on a quarterly basis, however, the detailed schedule shall be consistent with Section J attachment entitled, "Planned HEU Delivery Schedule." In the event that the parties cannot reach an agreement as to the quarterly shipping schedule, the Government shall only be bound to Section J attachment entitled, "Planned HEU Delivery Schedule." In the event the Contractor is unable to receive and/or process HEU in accordance with such schedules, the Contractor shall immediately notify the CO of any resulting delay, request an alternate delivery or performance date, and identify any impacts to the processing caused by such a delay. Although the Government agrees to make a good faith effort to accommodate such requests, the Government is not bound to make accommodations.

4.1.1.8 The Contractor shall inventory the HEU shipped by the Government. The Contractor shall physically segregate delivered HEU from other HEU in its possession through the weighing, processing, and accountability sampling steps identified in this contract.

4.1.2 The Contractor shall receive HEU at a facility located in the United States and licensed by the U.S. Nuclear Regulatory Commission (NRC) to possess and process HEU.

4.1.2.1 The Contractor shall procure all diluent necessary to down-blend the HEU to 4.95% Derived LEU.

4.1.2.2 The processing facility shall be located in the United States and have the capability of recovery, purification and down-blending of Category I quantities of HEU to Derived LEU.

4.1.3 The Government will deliver HEU to the Contractor in Government-owned, leased, or loaned containers, and Cargo Restraint Tie-downs (CRTs) or Cargo Pallet Assemblies (CPAs). The "delivery" of HEU to the Contractor shall be deemed to occur upon the physical receipt of the HEU at the Contractor's processing facility, located in the United States. A copy of the Form DOE/NRC-741 and analytical data shall accompany the delivery of HEU to the Contractor. The Contractor shall physically segregate HEU subject to this contract from any other HEU through the weighing, processing, and accountability sampling steps.

4.1.3.1 Shipping containers containing HEU will be shipped directly from the Government facility, or its designated site. The primary and secondary shipping containers shipped to the Contractor will not exceed a smearable alpha contamination limit of 220 dpm/100cm^2 on the outside of the containers. Within twenty-one (21) calendar days after receipt of the HEU, or as otherwise agreed between the Government and the Contractor, the Contractor shall return empty shipping containers (including any spacers if used), CRTs and CPAs to the designated Government facility.

4.1.3.2 Empty shipping containers, CRTs, and CPAs returned to the Government shall be palletized, banded or shrink wrapped and a tamper indicating device applied. Items that are to be returned to the Government shall include the empty shipping containers (including any spacers, if used), CRTs, and CPAs. Convenience containers, wrappings, and other packing material (for example, the aluminum extrusions containing the unclad elements, glass/plastic bottles, slip-top and screw-top cans, bales, etc.) are not to be returned to the Government and shall be disposed of by the Contractor. The Contractor **shall palletize empty shipping containers on metal pallets to be provided by the Contractor. The Contractor shall use customized International Metal pallets (40'x40" wide of 14 gauge hot dipped galvanized steel with six top boards and three runners – Model number: B-4040-1463) or equivalent pallet for the ES-3100 shipping container. The use of equivalent pallets shall be submitted by the Contractor to the COR for approval. Each p**allet of empty shipping containers shall be labeled "Empty." CRTs and CPAs shall be banded and a TID applied to each individual CRT and CPA.

4.1.3.3 Prior to return of shipping containers, the Contractor shall radiologically survey all of the returned items for loose and fixed activity (alpha and Beta-gamma) to meet both the Government and the receiving site's specific requirements [220 dpm/100cm^2]. Surveys shall include all of the external surfaces of the shipping container drums and any of the internal areas that are accessed/opened during the loading/unloading process. It is noted that these surveys are not intended to be 100 percent surveys for the "free release" of the containers and their contents. The Contractor shall return all of the survey data (along with the items) to the Government for its use in radiologically assessing the receipt, control, and reuse of these items. The Government will return the metal pallets to the Contractor within fourteen (14) calendar days of receipt by the Government.

4.1.3.4 Title to and/or responsibility for shipping containers, CRTs and CPAs shall remain with the Government. In the event containers are identified by the Government as non-returnable, the Contractor shall take title to and responsibility for the disposal of the containers. The Contractor shall maintain the returnable containers, CRTs, and CPAs in

good condition and shall not use them for any materials other than the uranium shipped therein, until returned to the Government. In the event that the containers, CRTs, or CPAs are not returned to Government in the same condition as provided, the Contractor shall reimburse the Government with the market value for the replacement or the actual cost of the repair.

4.1.4 The Contractor shall account for and inventory the HEU shipped by the Government and shall enter into a Shipper/Receiver Agreement (SRA) with the Government and the Government's designated shipping facility Contractor, in accordance with Section H clause entitled "Shipper/Receiver Agreement (SRA)," to document the methods used to establish accountability values for the HEU.

4.2 Processing and Down-Blending Requirements of HEU to LEU

4.2.1 The Contractor shall down-blend forty (40) MT of Derived LEU within two years after delivery of HEU begins. All quantities of HEU provided to the Contractor shall be down-blended within one year of final delivery of HEU to the Contractor. The Contractor shall down-blend the HEU to LEU at a 4.95% assay. Derived LEU shall meet the specifications provided in the Section J attachment entitled "Specification for LEU Derived from HEU." The UF_6 delivered to the Government or its designee **shall be at a 4.95% assay and** shall meet the ASTM International (ASTM) Specification C996-04^{E1}. Any Contractor requested deviation for LEU not meeting the specifications provided in the Section J attachment entitled "Specification for LEU Derived from HEU" shall be submitted by the Contractor to the CO for approval. The Contractor shall establish an account in the name and for the benefit of the Government which represents the quantities of Government-owned LEU (Government LEU Account) down-blended. All Derived LEU shall be stored in accordance with paragraph 4.3 below and the Holding Agreement.

4.2.2 The Contractor shall perform selective batch processing in the uranium recovery, purification and/or down-blending operations to dilute certain impurities, such as transuranics (TRU) and fission products.

4.2.3 The Contractor shall establish accountability values for the Derived LEU as it is generated.

4.2.4 The Government recognizes that some of the uranium furnished under this contract may be lost in processing or may remain in residues from which it cannot be economically recovered. Unless otherwise agreed to in writing by the Government, the allowable uranium process losses are limited to One and one half (1 ½) percent of the total uranium input at dissolution for processing under this contract. Both that uranium lost in processing and that uranium not economically recoverable shall be considered to be "process losses." The title to authorized uranium process losses shall be deemed abandoned by the Government and shall vest in the Contractor.

4.2.4.1 The Contractor shall reimburse the Government for the value of the uranium that is not returned and is in excess of the authorized uranium process losses in the performance of the work.

4.2.5 The Contractor shall take title to and dispose of all of the waste streams resulting from activities performed under this contract.

4.3 Storage of LEU and Preparation for Shipment of UF_6

4.3.1 The Contractor shall store the LEU in the Government's LEU Account in accordance with the Holding Agreement (including, but not limited to, the requirement that the Derived LEU remain within the United States, except as otherwise agreed to in advance by the Contracting Officer (CO)). The Contractor shall have all Derived LEU available for shipment to the Government as specified in the PWS and Holding Agreement, within one year of final delivery of the HEU to the Contractor. The Derived LEU shall be converted to or exchanged for UF_6 and prepared for Physical Delivery to the Government, as needed, in Contractor-furnished cylinders.

4.3.2 In accordance with the Holding Agreement, 40 MT of Government owned LEU in the form of UF_6 from the Government LEU Account shall be available to the Government two years after delivery of HEU begins and available for Physical Delivery to the Government within 30 days of receipt of written direction from the COR. Up to 100% of the LEU down-blended to date shall be available for Physical Delivery to the Government in the form of UF_6 within three years after written direction from the COR.

4.4 Reporting Requirements

The Contractor shall submit all reports in accordance with the Section J attachment entitled "Reporting Requirements Checklist."

5.0 Quality Assurance

5.1.1 The Contractor shall comply with quality assurance requirements as established by Nuclear Quality Assurance manual (NQA-1), Quality Assurance Program Requirements for Nuclear Facilities or another equivalent nuclear industry standard, unless otherwise specified in this contract.

5.1.2 The Contractor shall maintain its established quality assurance program meeting the requirements of ANSI/ASME NQA-1 or another equivalent nuclear industry standard, unless otherwise specified in this contract. The extent to which NQA-1 applies is dependent upon the nature and scope of work to be performed, and the relative importance of the items or services being produced.

5.1.3 The quality assurance program, including procedures, processes and products shall be documented and subject to review by the CO or Contracting Officer's Representative. The CO may furnish written notice of the acceptability of the Contractor's quality assurance program.

5.1.4 All supplies and services under the contract, whether manufactured or performed within the Contractor's facility or at any other source, shall be controlled at all points necessary to assure conformance with contractual requirements.

5.1.5 The uranium product quality shall be in accordance with the specifications provided in the Section J attachment entitled "Specification for LEU Derived from HEU."

6.0 SERVICE DELIVERY SCHEDULE

Performance Objective	PWS Paragraph	Performance Threshold
Acceptance of HEU	4.1	Accept delivery of HEU in accordance with Section J, Attachment entitled "Planned HEU Delivery Schedule."
Down-blend HEU	4.2.1	40 MT of Derived LEU down-blended within two years after delivery of HEU begins. All quantities of HEU down-blended within one year of final delivery of the HEU to the Contractor. Government LEU Account established representing the quantities of Government-owned LEU down-blended. Derived LEU meets specifications in Section J Attachment entitled "Specification for LEU Derived from HEU."
Provide UF_6	4.2.1	UF_6 shall meet ASTM specifications.
Store Derived LEU	4.3.1	Derived LEU shall be stored in a Government Account and shall not be physically removed out of the United States, except as otherwise agreed to in advance by the CO.
Have UF_6 ready for shipment	4.3.2	40 MT of Government owned LEU in the form of UF_6 from the Government LEU Account shall be available to the Government two years after delivery of HEU begins. 40 MT of LEU in the form of UF_6 shall be available for Physical Delivery to the Government within 30 days of receipt of written direction from the COR. 100% of the LEU in the Government LEU Account in the form of UF_6 shall be available for Physical Delivery to the Government within 3 years after written direction from the COR, or on the last day of the contract period of performance whichever is earlier.
Reports	4.4	100% of reports delivered on time in accordance with Section J, Attachment entitled "Reporting Requirements Checklist."

HOLDING AGREEMENT
December 2, 2008

This HOLDING AGREEMENT ("Agreement") provides supplemental requirements for the storage of Government-owned LEU under Contract Line Item 0002.

ARTICLE I. ESTABLISHMENT OF GOVERNMENT'S LEU ACCOUNT

In accordance with the Contract, the Contractor shall store Derived LEU and make available to the Government in accordance with ARTICLE IV below the quantity of LEU in the form of UF_6 that resulted from the conversion or exchange of the Derived LEU produced under the Contract (Government-owned LEU). The Contractor shall establish an account in the name and for the benefit of the Government which represents the quantities of Government-owned LEU (Government LEU Account). The Government LEU Account will be credited and debited, in accordance with the Contract and ARTICLE IV below.

ARTICLE II. CONTRACTOR'S RIGHT TO USE REMAINDER LEU

Subject to the terms of the Contract and this Agreement, the Contractor may use as working stock the total balance of the Government LEU in the Government's LEU Account less the 40 MTU in the form of UF_6 that shall be physically maintained at the Contractor's facility or facilities in accordance with ARTICLE IV below (Remainder LEU). The Government acknowledges that the Remainder LEU is fungible, may exist in various chemical forms at various times, and that the Contractor is not required to maintain, identify, or allocate separate physical inventories of the Remainder LEU. The Government agrees that the Remainder LEU may be commingled with the Contractor's working stock inventory of LEU. The Contractor shall ensure that no other party has title to or any other interest conflicting with the Government's title to the Remainder LEU. The Contractor agrees to maintain the Remainder LEU within the United States at all times, unless prior written authorization is provided to the Contractor by the Contracting Officer. The Remainder LEU shall continue to meet the specifications of Section J Attachment 5, although the Contractor is not required to continuously re-analyze its working stock inventory of LEU. The Contractor shall not sell, transfer, barter, or otherwise dispose of the Remainder LEU. The Contractor shall not exchange or "book transfer" the Remainder LEU for non-U.S. LEU located outside of the United States, unless prior written authorization is provided to the Contractor by the Contracting Officer. Nothing in this ARTICLE II, however, shall require the Contractor to obtain Contracting Officer approval for performing uranium exchanges or book transfers, so long

as the uranium contained in the Government's LEU Account remains within the United States. **While use of the Remainder LEU is permitted, provided it is used in accordance with this Agreement and other applicable Contract clauses, such usage does not constitute an activity for which Clause I. Clause 952.250-70 NUCLEAR HAZARDS INDEMNITY AGREEMENT (JUN 1996) applies.**

ARTICLE III. INSURANCE

The Contractor shall maintain, at all times when it has possession, custody, or control of Government-owned LEU or other assets under this Agreement, insurance adequate to cover the risk of loss of the Government-owned LEU. All insurance required of the Contractor shall be for the protection of the Government against risk and liabilities in connection with the Government-owned LEU. A certificate of insurance shall be furnished to the Contracting Officer at least thirty (30) days prior to the commencement of delivery of the Government-owned LEU to the storage facility.

Each policy of insurance against loss or damage to the Government's property shall name the United States of America (Department of Energy) as loss payee as its interest may appear and shall contain a loss payable clause reading substantially as follows:

> "Payments for losses under the Contractor's property insurance related to losses of the Government-owned LEU, if any, shall be adjusted with the Contractor and the proceeds shall be payable to the Contractor and to the Treasurer of the United States of America, as its interests may appear."

Additionally, each property policy of insurance shall contain an endorsement reading substantially as follows:

> "The insurer waives any right of subrogation against the United States of America which might arise by reason of any payment made under this policy."

ARTICLE IV. QUANTITY AND SCHEDULE

The Contractor shall physically store and maintain 40 MTU of Government owned LEU in the form of UF_6 in the Government LEU Account at its facility, which shall be in the United States, during the term of this contract. Forty (40) MT of UF_6 from the Government LEU Account shall be available for shipment to the Government no later than two years after initial HEU is delivered to the Contractor for down-blending.

Withdrawals from the Government LEU Account will be accomplished by the

COR providing written direction to the Contractor, with a copy to the CO. Within 30 days of receipt of written direction from the COR, the Contractor shall have available for Physical Delivery to the Government or its designee up to 40 MTU of Government owned LEU in the form of UF_6 from the Government LEU Account in Contractor-furnished industry standard cylinders. Within 150 days of the Government or its designee taking delivery, the Contractor shall replace the quantity of UF_6 delivered, ensuring that a minimum of 40 MTU of Government owned LEU in the form of UF_6 is in the Government LEU Account and physically located at the Contractor's facility and again available on 30 days notice. During the 150 day period following a delivery, the Government may give written direction to withdraw another 40 MTU in the form of UF_6 in the Government LEU Account. This delivery shall occur either 30 days from written direction from the COR or at the end of the 150 day restock period, whichever is longer.

Up to 100% of the LEU in the Government LEU Account shall be available for Physical Delivery in the form of UF_6 within 3 years after written direction from the Government. Except for the 150 days following a delivery to the Government, the Contractor shall retain in storage a minimum of 40 MTU of Government owned LEU in the form of UF_6. The process of providing UF_6 in accordance with the specification contained in Section J, Attachment 1 from retained inventory and replenishing the retained inventory shall continue until the Government has taken custody of all LEU in the Government LEU Account.

UF_6 delivered to the Government *or* its designee shall not contain any **F**oreign **O**bligations**, unless prior written authorization is provided to the Contractor by the Contracting Officer**.

ARTICLE V. WARRANTY

Pursuant to "Inspection of Supplies—Fixed Price" clause (52.246-2) in Section E of the contract, the UF_6 released hereunder by the Contractor shall conform to the specification contained in Section J, attachment 1 entitled, "Performance Work Statement for 12.1 MT Highly Enriched Uranium – Down-Blending Services and Low Enriched Uranium Inventory, and attachment 5 entitled, "Specification for LEU Derived from HEU."

ARTICLE VI. CERTIFICATIONS

The Contractor will certify annually that LEU is being stored in compliance with this Agreement.

U.S. DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION

REPORTING REQUIREMENTS CHECKLIST

1. PROGRAM/PROJECT TITLE	2. IDENTIFICATION NUMBER
12.1 MT Highly Enriched Uranium – Down-blending Services and Low Enriched Uranium Inventory	**DE-AC52-09NA28609**

3. PARTICIPANT NAME AND ADDRESS
TBD

4. PLANNING AND REPORTING REQUIREMENTS

Frequency

A. General Management

- ☐ Management Plan (requires COR approval)
- ☐ Status Report
- ☐ Summary Report

B. Schedule/Labor/Cost

- ☐ Milestone Schedule/Plan
- ☐ Labor Plan
- ☐ Facilities Capital Cost of Money Factors Comp.
- ☐ Contract Facilities Capital and Cost of Money
- ☐ Cost Plan
- ☐ Milestone Schedule/Status
- ☐ Labor Management Report
- ☐ Cost Management Report

C. Exception Reports

- ☐ Conference Record
- ☐ Hot Line Report

D. Performance Measurement

- ☐ Management Control System Description
- ☐ WBS Dictionary
  - ☐ Index
  - ☐ Element Definition
- ☐ Cost Performance Reports
  - ☐ Format 1 - WBS
  - ☐ Format 2 - Function
  - ☐ Format 3 - Baseline

Frequency

E. Financial Incentives

- ☐ Statement of Income and Expenses
- ☐ Balance Sheet
- ☐ Cash Flow Statement
- ☐ Statement of Changes in Financial Position
- ☐ Loan Drawdown Report
- ☐ Operating Budget
- ☐ Supplementary Information

F. Technical

- ☐ Notice of Energy R&D Project (Required with any of the following)
- ☐ Technical Progress Report (Annual Accomplishment Report)
  - ☐ Draft for Review
  - ☐ Final for Approval
- ☐ Topical Report
- ☐ Final Technical Report
  - ☐ Draft for Review
  - ☐ Final for Approval
- ☐ Software
- ☐ Other (Specify):

G. Environment, Safety & Health

- ☐ **(**Specify)

5. FREQUENCY CODES

A - As Required	BM — Bi-Monthly	S - Semi-Annually
C - Change to Contractual Agreement	M - Monthly	X - With Proposal/Bid/Application or with Significant Changes
F - Final (end of effort)	O - Once After Award	Y - Yearly or Upon Renewal of Contractual Agreement/Revision of Task Assignment
D — Daily	Q - Quarterly	

6. SPECIAL INSTRUCTIONS (ATTACHMENTS)

- ☒ Report Distribution List/Addresses (**See attached**)
- ☐ Reporting Elements
- ☐ Due Dates within **20 days after reporting period unless noted**
- ☐ Analysis Thresholds
- ☐ Work Breakdown Structure
- ☒ Other (**See attached**)

7. PREPARED BY		8. REVIEWED BY	
_____ *(Signature)*	_____ *(Date)*	_____ *(Signature)*	_____ *(Date)*

(2-06)

6. SPECIAL INSTRUCTIONS (Attachments)

The Contractor shall provide reports to the Government as follows:

(1) Down-blending Progress Report (monthly):
Monthly progress reports documenting the quantity of HEU received; the quantity of HEU down-blended; the quantity of LEU produced; and the quantity of LEU shipped. The reports shall at minimum provide the quantity of total U and U-235 in each category and inventory source provided to the Contractor with each shipment for both the current month and for the program to date. Reports shall be provided within ten (10) working days following the end of a calendar month.

(2) LEU Accounting Report (quarterly):
The Contractor providing storage for the Government-owned LEU inventory shall provide to the Government, within 20 working days following the end of each calendar quarter, a quarterly account statement of the quantities of LEU received, the quantities withdrawn from the inventory by the Government, and the quantities that remain in storage.

(3) Special Nuclear Material (SNM) Reconciliation Report (annually):
An annual SNM reconciliation report certified by the Contractor MC&A official for uranium received, processed, shipped, and delivered to the Government. The reconciliation report will document the uranium balance by each batch or item and referenced to its DOE/NRC Form 741 receipt where applicable, and shall include receipts, transfers, and shipments, and process losses. The reconciliation report shall be submitted to the COR by January 1 and shall cover the period October 1 through September 30 of the previous government fiscal year.

(4) Final Down-blending Report (one time end of effort):
A final (end of effort) down-blending report that documents the SNM balance (HEU receipts, HEU returns, uranium diluent received and processed, LEU generated, LEU exchanged or converted to UF_6, and process losses), identifies deviations, and that establishes the financial liability submitted to the COR within 60 working days following the final material balance and certification and or transfer of product.

Report Distribution List

Report/Plan	Form No. (if any)	Frequency	Copies	Address
Down-blending Progress Report	N/A	M	2, 1, 1	A, B, C*
LEU Accounting Report	N/A	Q	2, 1, 1	A, B, C*
SNM Reconciliation Report	N/A	A	2, 1, 1	A, B, C*
Final Down-blending Report	N/A	F	2, 1, 1	A, B, C*

*Hard copies of the reports shall be mailed via regular mail to addresses A and B listed below. One electronic copy shall be submitted to the COR listed in Section G. The front page of each report and a copy of each transmission page submitted to the COR shall be submitted electronically to address C listed below.

List of Addresses

A. National Nuclear Security Administration
Y-12 Site Office
Attn: TBD

B. National Nuclear Security Administration (NA-26)
Office of Fissile Materials Disposition
Attn: TBD

C. U. S. Department of Energy
NNSA Service Center/OBS/FAD/SCSD
Attn: Leticia Y. Potts
P.O. Box 5400
Albuquerque, NM 87185-5400

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement

This section presents information summarizing the 12.1 metric tonnes (MT)highly enriched uranium (HEU) materials to be provided for down-blending to low enriched uranium (LEU) under this Contract. Table 1 presents the quantities of materials by material grouping. The summary data in this table was compiled using historical information and analytical data for the materials which is considered the best available information at this time. The assay range of material is between 20% and 95% in the Uranium-235 isotope. The number of items and mass information for some material groupings will change due to DOE processing required to size-reduce and/or prepare the materials for packaging and shipment. In addition, material exchanges may also cause small changes within or between the material groupings such as the number of items, assay, and mass information during execution of the project.

Table 1 Summary of HEU Materials;
Mass by Material Grouping, kg

	Mass, kg		
Material Grouping	**Net**	**Uranium**	**U-235**
Unalloyed Metal	5611	5608	4469
Alloyed Metal	3958	3394	3047
Oxides	4395	2912	1949
Compounds	620	187	164
Sources and Standards	23	18	12
Reactor Fuel	386	30	26
Totals	14992	12148	9667

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

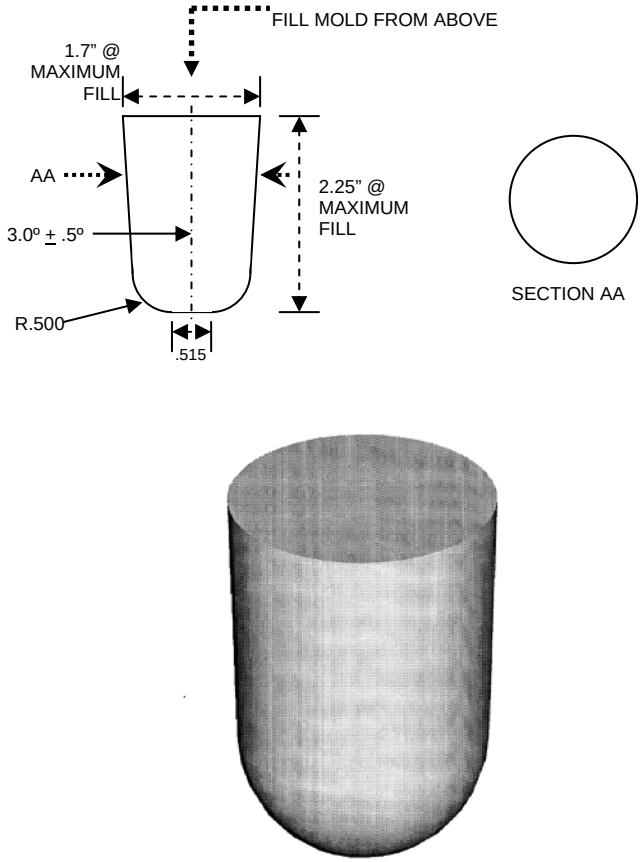
UNALLOYED METAL

Unalloyed Metal is uranium metal with trace quantities of elemental impurities. It is estimated that 75% of the Unalloyed Metal will require chemical purification. Some of the remainder will require cross-blending to reduce trace quantities of transuranics and fission products, and elemental contaminants in order to meet the ASTM specification for commercial nuclear fuel when down-blended. The Unalloyed Metal materials are unirradiated; the source of the trace quantities of transuranics and fission products is contamination from reprocessing at other DOE facilities as part of the DOE fuel cycle.

The Unalloyed Metal will be provided either as cast slugs or as broken metal. The unalloyed metal is considered homogenous. The broken metal is produced by breaking hollow cylindrical castings into smaller pieces to facilitate packing into cans. These small pieces of broken castings are sized to fit in either a 4 - 4 ¼ inch diameter by 4 3/8 inch or 8 ¾ inch high can and may be up to ~ 0.75″ x 1.5″ x 3″ in dimension. Each piece typically ranges between 80 and 300 grams. Cans are lined with wire mesh to protect the can surfaces. The slug castings are small, cylindrical-shaped castings. Slug sizes will vary, are not uniform in dimensions and may be irregularly shaped. Nominal dimensions are up to 1.7″ in diameter and up to 2.3″ tall. The nominal weight of each size of slug is up to 1.6 kg. Figure 1 describes the maximum size of cast slug provided under this work.

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

FIGURE 1: CAST SLUG



ALLOYED METAL

Alloyed Metal is uranium metal that has been alloyed with elements such as titanium, stainless steel, aluminum, and zirconium **is** up to one percent **non-U metal. The alloyed metals are further clarified in the ranges shown below:**

- **73% of the alloyed metals have greater than 99% U in the items. Typical impurities are U/Titanium and others.**
- **20% of the alloyed metals have greater than 90% U in the items. Typical impurities are U/Aluminum and U/Zirconium and others.**

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

- 7% of the alloyed metals have between 10% and 90% U in the items. Typical impurities are U/Aluminum, U/Stainless Steel, U/Molybdenum, U/Zirconium, U/Tungsten and others.

These materials contain trace quantities of elemental impurities and will require chemical purification and/or blending in order to meet the ASTM specification for commercial nuclear fuel when down-blended. The Alloyed Metal materials are also unirradiated and may also contain trace quantities of transuranics and fission products. Metal will be provided either as cast slugs as described above or as broken metal.

OXIDES

The Oxides grouping consists of nine (9) categories of oxide-type materials:

1. Crucible Skull Oxide: Uranium oxide residues from castings and molds. The oxides are typically in the form of U_3O_8 and will contain large amounts of carbon as well as traces of other materials such as erbium or yttrium. Some of these oxides resulted from the casting of various alloyed metals; therefore, the presence of elements such as molybdenum up to 10 weight percent, and aluminum, chromium, iron, nickel, titanium, and zirconium up to one weight percent are expected.
2. Other Oxide: Predominantly uranium carbide-pyrolytic carbon (UC_2). Other items include carbides and uranium oxides mixed with graphite, rag ash (carbides and U oxides mixed with graphite), U_3O_8 special samples mixed with unusual elements, and U_3O_8 mixed with other metal oxides. **These "Other Oxides" consists of various oxides (UO_2 and U_3O_8) and carbides of uranium mixed with graphite powder. PyC-UC_2 at 93.15% assay comprises approximately 85% of the "Other Oxides". The majority of the remainder are "rag and rotary calciner ash with assays ranging from 35%-93% and approximately 1% are special samples of U_3O_8 containing Zr, Ir, and Ta. The majority of these "Other Oxides" are comprised of scrap from fuel fabrication operations performed at Los Alamos National Laboratory**

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

for the Rover and TREAT programs. These materials are unirradiated.

3. Black Oxide: Typically U_3O_8 produced from burning of machine turnings and saw fines from both alloyed and unalloyed metals.
4. Impure Oxide: Various, low-grade uranium oxides containing impurities from recovery processes.
5. Dioxide: Uranium dioxide (UO_2).
6. Trioxide: Uranium trioxide (UO_3).
7. Ceramic Dioxide: Uranium dioxide produced at a high temperature to specific specifications.
8. Mixed Oxide: Uranium oxides of various compounds and/or enrichments.
9. Clinkers and Screenings: Small pieces of uranium metal and alloys, as well as large U_3O_8 particles screened from the casting process.

Quantities of each category of oxide are listed in Table 2. It is assumed that all oxide materials will require chemical purification in order to meet the ASTM

specification for commercial nuclear fuel when down-blended.

Table 2. Oxide Categories; Mass, kg

	Skull Oxide	*Other Oxide*	*Black oxide*	*Impure Oxide*	*Dioxide*	*Trioxide*	*Ceramic Dioxide*	*Mixed Oxide*	*Clinkers&Screenings*	**Totals**
Net Wt.	2013	243	336	316	237	30	4	160	1057	4396
Uranium Wt.	1562	118	213	124	59	23	3	27	783	2912
U-235 Wt.	1086	108	95	78	44	11	1	15	511	1949

COMPOUNDS
This material grouping is comprised of mixed uranium compounds which are typically of low purity but can be readily converted to “usable” uranium. These items consist

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

of "known" quantities of uranium and U-235. A list of expected compounds includes uranium peroxide, ammonium diuranate, vacuum cleanings, uranyl fluoride, and purified nitrate crystals. **There are approximately 187 kgU of uranium compounds which are comprised of approximately 98 kgU as UNH crystals (Avg. U-235 Assay - 87.04%); approximately 69 kgU are PYC - UO_2 powder (U-235 Assay - 93.15%); approximately 15 kgU are impure mixtures of uranium compounds (UC_2, UCO, SiC, UZr) and oxides (UO_2 and U_3O_8) with U-235 assays ranging from 23.52 to 93.15%; and the remaining approximately 5 kgU are "chunks" of graphite containing small quantities of uranium oxides and carbides (U-235 assays ranging from 27.98 - 93.15%). With the exception of the UNH crystals, all materials were recovered from fuel fabrication operations performed at Los Alamos National Laboratory for the Rover and TREAT programs. The purified UNH crystals are produced resulting from uranium chemical recovery of uranium-zirconium scrap. These materials are unirradiated.**

It is assumed that all uranium compounds will require chemical purification in order to meet the ASTM specification for commercial nuclear fuel when down-blended, except for the purified nitrate crystals.

SOURCES AND STANDARDS

Sources and Standards were used to calibrate instrumentation. These items consist of "known" quantities of uranium and U-235 encapsulated within a metal or alloy casing. The encapsulating material is not chemically or metallurgically bonded to the uranium, so the encapsulating material can be removed thus exposing the uranium. **There are approximately 18 kgU of "Sources/Calibration Standards" of which approximately 8 kgU are comprised of U/Al alloyed metal ingots from the Savannah River Site (SRS) Fuel Recycle Program; 5 kgU are U_3O_8 standards in the form of powder (most are from the SRS Fuel Recycle Program); and the remaining 5 kgU are enriched uranium in the form of metal disks, foils, and oxides (U-235 assays ranging from 20 - 93.16%).** It is assumed that some of these materials will require chemical purification in order to meet the ASTM specification for commercial nuclear fuel when down-blended.

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement (continued)

REACTOR FUEL

The Reactor Fuel material grouping consists of a variety of reactor fuel and reactor fuel related materials. The Reactor Fuel materials are summarized in Table 3 below. **Additional detail for the reactor fuel is provided in the "12.1 MT Reactor Fuel Data Package" beginning on page 15.** It should be assumed that all of these materials will require purification in order to meet the ASTM specification for commercial nuclear fuel.

The Reactor Fuel materials consist primarily of plates and rods. The MTR-type plates are typically U_3O_8 mixed with aluminum powder compressed and clad between aluminum plates, and are near 93% enrichment. Some of the reactor fuel contains other elements such as zirconium or boron.

When possible, reactor fuel materials will be provided in their current form. In some cases, the fuel materials may be size-reduced to facilitate packaging into the ES-3100 shipping containers or may be shipped in an appropriate container (e.g., the ES-4100, a replacement for the 110-gallon 6M, should the package become available).

The U.S. Government represents that the reactor fuel materials will be only slightly irradiated or unirradiated. Such slight irradiation consists of the following:

- Maximum of 10^{-8} grams of plutonium per gram ^{235}U.
- Maximum fission product activity of 10^{-3} millicurie per gram ^{235}U.
- Maximum beta radiation level of five (5) millirem per hour at one (1) inch, or one (1) millirem per hour at one (1) foot from the surface of the fuel materials.
- Maximum gamma radiation level of two (2) millirem per hour at one (1) inch, or one (1) millirem per hour at one (1) foot from the surface.

Reactor Fuel materials will not exceed the aforementioned levels unless otherwise negotiated with the Contractor prior to shipment.

HEU MATERIAL SUMMARY
12.1 MTU HEU Down-blending Requirement

Table 3 Reactor Fuel Summary

			Weight, g			Irradiation History	
Reactor	**Fuel Form**	**Item count**	**Net**	**U**	**U-235**	**None**	**Slight**
ARMF Idaho	Plates, plate tray	52	89248	3394	3162	X	X
BR2 (Belgium)	Plates	29	187030	15196	13659		X
Bulk Shielding Reactor (ORNL)	Unirradiated fuel assembly scrap plates produced for the Bulk Shielding Reactor. U3O8 outer and inner plates made of uranium/aluminum alloy, and control rods.	18	3309	3423	3020	X	
CNEA RA-2 (Argentina)	Bundles of MTR-type plates	35	78536	3716	3342	X	
Miscellaneous	Plate	1	24197	1793	1670	X	
PBF PWR	INL PWR Rod standards	4	3107	2196	1405	X	
Reactor Fuel Summary		**139**	**385427**	**29538**	**26258**		

[1] **Some material carries peaceful use foreign obligations between the United States and the European Union and will require special reporting.**

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve

SHIPPING CONTAINER SUMMARY

Type B shipping containers, predominately the ES-3100 shipping container, will be used to ship the HEU materials under this contract. Shipping containers must be returned to the Y-12 National Security Complex for reuse. Other Type B shipping containers may also be used as appropriate as described in the reactor fuel section above. When appropriate for the materials being shipped, shipping containers will contain three to six (3 to 6) cans with nominal diameter of 4 - 4.25 inches. Cans typically have press-fit or ring clamp lids and may have a lifting bail to facilitate loading and removal. Tables 4A and 4B list the different heights of the cans that will be used and the number of cans that will be in the shipping containers. After unloading, cans are to be disposed of by the Contractor. Also note that polyethylene or Teflon bottles may also be used and shall be disposed of by the Contractor.

Table 4A. Convenience Cans and Bottles.

	Nominal Convenience Cans Height (in)				Bottles	
HEU Form	**4.375**	**4.875**	**8.75**	**10**	**Poly[1]**	**Teflon[2]**
Unalloyed Metal	X	X	X			
Alloyed Metal		X	X			
Oxides		X	X	X	X	X
Compounds			X	X	X	X
Sources and Standards			X	X		

Notes:
1. Poly bottles may be used for shipping "Other Oxides."
2. Teflon bottles used for shipping uranyl nitrate crystals.
3. For metal, sample bottles, vials, or convenience cans containing a drilled sample pack may be inerted with argon. The lids for the inerted containers will have clips holding the lids in place.

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve (continued)

Table 4B. Maximum Number of Cans and Bottles Per Shipping Container.

	Nominal Convenience Cans Height (in)				Bottles	
Container	**4.375**	**4.875**	**8.75**	**10**	**Poly**	**Teflon**
ES-3100	5	5	3	3	3	3

ANALYTICAL SUMMARIES FOR UNALLOYED METAL AND OXIDES

Tables 5 and 6 are summaries of analytical data from samples of metal and oxide materials that have been previously processed. These data are representative of the HEU materials to be provided under this Contract. Since most of the materials to be provided have not yet been processed, sampled and analyzed, the data in the tables indicate the range and mean levels of various constituents that may be expected in the HEU. Much of the material will be further processed, sampled and/or analyzed during Contract execution; however, the total quantity of metal or oxide estimated to require chemical purification is not expected to increase.

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve (continued)

Table 5. Summary Data for Metal (1969 samples).

Item	Units	Max	Min	Median	Mean	Std Dev
U	wt %	100.00%	85%[1]			
U-232	µg/gU	0.00705	0.00000	0.00000	0.00013	0.00038
U-234	µg/gU	10,970	1,270	9,870	7,837	2,773
U-235	wt %	95%	20%			
U-236	µg/gU	24,120	780	3,560	4,228	3,702
Tc-99	µg/gU	3.19	0.00	0.00	0.01	0.09
TRU	Bq/gU	13,191.0	0.0	12.9	171.8	498.1
FPGamma	MeV Bq/gU	577	0	0	2	27
Al	µg/gU	5,650.0	0.3	10.0	14.4	127.7
Sb	µg/gU	2.0	0.0	0.3	0.5	0.5
As	µg/gU	15.0	0.0	0.3	1.4	2.9
Ba	µg/gU	84.0	0.0	0.3	0.6	2.2
Be	µg/gU	41.0	0.0	0.3	0.4	1.2
Bi	µg/gU	1.0	0.0	0.3	0.4	0.3
B	µg/gU	115.0	0.1	0.3	1.4	7.6
Br	µg/gU	506.0	0.0	5.0	6.1	14.6
Cd	µg/gU	2.0	0.0	0.3	0.3	0.1
Ca	µg/gU	1300.0	0.0	0.6	4.4	34.6
C	µg/gU	979.0	6.0	407.0	390.9	122.1
Cs	µg/gU	1.0	0.0	0.3	0.3	0.2
Cl	µg/gU	973.0	0.0	7.0	9.0	35.6
Cr	µg/gU	1000.0	0.3	11.0	12.6	23.9
Co	µg/gU	91.0	0.0	0.3	0.7	2.6
Cu	µg/gU	105.0	0.3	5.0	5.6	5.6
Dy	µg/gU	17.0	0	0.3	0.3	0.5
Er	µg/gU	233.0	0.0	0.3	2.8	12.5
Eu	µg/gU	1.0	0.0	0.3	0.3	0.1
F	µg/gU	71.0	0.0	7.0	6.8	4.1
Gd	µg/gU	3.0	0	0.3	0.3	0.1
Hf	µg/gU	0.0	0	0.3	0.4	0.3
Fe	µg/gU	1,934.0	0.3	79.0	86.7	78.4
Pb	µg/gU	4.0	0.0	0.3	0.7	1.1
Li	µg/gU	10.0	0.0	0.3	0.4	0.4
Mg	µg/gU	51.0	0.1	0.3	0.9	2.4

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve (continued)

Item	Units	Max	Min	Median	Mean	Std Dev
Mn	µg/gU	69.0	0.3	3.0	3.8	3.6
Hg	µg/gU	7.0	0.0	0.5	0.6	0.3
Mo	µg/gU	273.0	0.0	23.0	26.0	26.2
Ni	µg/gU	270.0	0.3	36.0	38.2	23.6
Nb	µg/gU	20.0	0.0	0.3	2.0	5.1
P	µg/gU	1000.0	0.2	7.0	20.9	46.0
K	µg/gU	202.0	0.0	0.3	2.4	7.2
Ru	µg/gU	2.0	0.0	0.3	0.4	0.2
Sm	µg/gU	2.0	0.0	0.3	0.3	0.2
Se	µg/gU	10.0	0.0	2.0	1.8	1.1
Si	µg/gU	1,500.0	0.3	95.0	124.7	108.3
Ag	µg/gU	410.0	0.0	0.3	0.8	13.3
Na	µg/gU	94.0	0.0	0.3	1.4	4.5
Sr	µg/gU	20.0	0.0	0.3	2.3	5.9
S	µg/gU	260.0	0.2	10.0	15.5	23.0
Ta	µg/gU	230.0	0.1	0.3	2.4	12.9
Th	µg/gU	78.0	0.0	1.8	2.4	6.7
Sn	µg/gU	12.0	0.0	0.3	1.4	2.9
Ti	µg/gU	94.0	0.3	0.8	1.8	4.5
W	µg/gU	899.0	0.0	40.0	45.7	50.9
V	µg/gU	10.0	0.0	0.3	0.5	0.6
Zn	µg/gU	34.0	0.0	0.3	1.7	3.3
Zr	µg/gU	500.0	0.2	4.0	9.8	21.5
TMI	µg/gU	6,916.3	0.0	855.1	864.6	314.3
EBC	µgEB/gU	117.5	0.0	2.5	3.4	7.6

[1] Includes alloyed metal.

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve (continued)

Table 6. Summary Data for Oxide (976 samples).

Item	Units	Max	Min	Median	Mean	Std Dev
U	wt %	86.24%	5.81%			
U-232	µg/gU	0.01269	0.00000	0.00000	0.00007	0.00056
U-234	µg/gU	11,850	1,220	6,415	6,197	3,144
U-235	wt %	95%	20%			
U-236	µg/gU	202,480	310	3,240	3,524	9,016
Tc-99	µg/gU	1,879.48	0.00	0.00	7.25	78.48
TRU	Bq/gU	2,465.8	0.0	58.1	121.6	236.6
FPGamma	MeV Bq/gU	369.0	0.0	0.0	1.0	15.0
Al	µg/gU	2,300.0	1.0	56.0	113.3	184.6
Sb	µg/gU	1,000.0	0.1	0.3	6.3	42.4
As	µg/gU	36.0	0.0	0.3	0.9	2.6
Ba	µg/gU	1,600.0	0.1	1.8	31.0	114.0
Be	µg/gU	700.0	0.0	2.0	9.5	40.3
Bi	µg/gU	34.0	0.1	0.2	0.6	1.7
B	µg/gU	1,400.0	0.1	7.0	50.4	138.2
Br	µg/gU	660.0	0.1	0.4	6.3	32.8
Cd	µg/gU	240.0	0.1	0.3	3.7	15.2
Ca	µg/gU	1,500.0	1.3	62.0	211.7	305.3
C	µg/gU	374,000.0	13.0	5,420.0	19,407.7	36,581.3
Cs	µg/gU	19.0	0.0	0.2	0.5	1.3
Cl	µg/gU	2,470.0	0.6	19.0	83.5	177.9
Cr	µg/gU	11,000.0	1.0	20.0	101.2	407.5
Co	µg/gU	697.5	0.0	1.0	6.0	30.5
Cu	µg/gU	6500.0	0.3	14.0	123.0	403.4
Dy	µg/gU	30.0	0.2	0.6	1.3	2.5
Er	µg/gU	470,000.0	0.2	3.0	4,753.5	33,226.6
Eu	µg/gU	14.0	0.1	0.3	0.6	1.0
F	µg/gU	1490.0	0.1	2.5	41.4	129.5
Gd	µg/gU	160.0	0.2	0.8	1.5	5.6
Hf	µg/gU	2,400.0	0.2	1.0	41.8	144.2
Fe	µg/gU	23,000.0	0.7	120.0	305.0	968.6
Pb	µg/gU	780.0	0.1	0.8	14.4	57.0
Li	µg/gU	315.1	0.0	1.0	5.2	22.4
Mg	µg/gU	4,700.0	0.1	13.3	73.5	229.5

HEU MATERIAL SUMMARY
HEU for Unallocated LEU Reserve (continued)

Item	Units	Max	Min	Median	Mean	Std Dev
Mn	µg/gU	1,200.0	0.2	10.0	46.3	116.5
Hg	µg/gU	94.0	0.2	0.7	1.4	3.6
Mo	µg/gU	3,900.0	0.1	18.0	52.7	161.9
Ni	µg/gU	1,100.0	1.3	36.1	88.5	165.9
Nb	µg/gU	2,200.0	0.0	0.3	12.5	87.0
P	µg/gU	1,000.0	0.1	17.0	59.1	137.4
K	µg/gU	2,700.0	0.1	15.0	87.0	209.4
Ru	µg/gU	71.0	0.1	0.4	1.6	4.7
Sm	µg/gU	29.0	0.2	0.6	1.1	2.3
Se	µg/gU	130.0	0.0	0.2	1.7	7.7
Si	µg/gU	3,500.0	10.0	201.4	297.4	293.1
Ag	µg/gU	880.0	0.1	0.6	3.9	31.2
Na	µg/gU	2,400.0	0.1	13.0	80.1	207.2
Sr	µg/gU	460.0	0.0	0.8	8.8	34.1
S	µg/gU	32,300.0	0.3	32.0	206.7	1213.1
Ta	µg/gU	5,100.0	0.1	1.4	17.0	177.5
Th	µg/gU	4,500.0	0.1	0.6	36.5	184.9
Sn	µg/gU	810.0	0.1	2.0	21.8	62.4
Ti	µg/gU	1,300.0	0.2	8.2	36.5	119.3
W	µg/gU	1,101.9	0.0	7.0	35.5	103.9
V	µg/gU	320.0	0.0	1.0	6.3	16.7
Zn	µg/gU	1,500.0	0.1	5.0	42.9	131.6
Zr	µg/gU	16,000.0	0.4	23.0	113.8	610.5
TMI	µg/gU	603,870.1	209.5	4,565.8	18,792.0	45,081.1
EBC	µgEB/gU	6,421.7	1.8	15.9	96.0	368.2

12.1 MT Reactor Fuel

Data Package

Table 3. Reactor Fuel Materials

			Weight, g			Irradiation History		Est. # ES 3100 Containers
Reactor	**Fuel Form**	**Item count**	**Net**	**U**	**U-235**	**None**	**Slight**	
ARMF Idaho	Plates, plate tray	52	89248	3394	3162	X	X	43
BR2 (Belgium)	Plates	29	187030	15196	13659		X	83
Bulk Shielding Reactor (ORNL)	Unirradiated fuel assembly scrap plates produced for the Bulk Shielding Reactor. U3O8 outer and inner plates made of uranium/aluminum alloy, and control rods.	18	3309	3423	3020	X		33
CNEA RA-2 (Argentina)	Bundles of MTR-type plates	35	78536	3716	3342	X		18
Miscellaneous	Plate	1	24197	1793	1670	X		1
PBF PWR	INL PWR Rod standards	4	3107	2196	1405	X		2
Reactor Fuel Summary		**139**	**385427**	**29538**	**26258**			180

Notes:

[1] Some material carries foreign obligation requirements.

[2] Existing inner packaging details maintained to extent possible as shown on scrap declaration.

[3] Oversize elements may be size reduced and small pieces canned for packaging. Batch configuration will be maintained.

[4] Packaging of elements in ES-3100 will be minimized to extent practicable.

ARMF Idaho

DECLARATION DESCRIPTION **Declaration Number:** ID-06-02

MATERIAL

General Description of Material: (including type of material, physical and chemical form, description of matrix for mixtures, amount, etc.)

15 ARMF Standard (slightly irradiated) Fuel Elements (14 Mark I & 1 Mark II):
Configuration - Mark I has 15 flat plates containing ~179g 235U per element and Mark II has 14 plates (8 flat & 6 bent) containing ~131g 235U per element
Element Dimensions (All) - rectangular 8.28 cm (3.26 in) x 8.28 cm (3.26 in) x 98.8 cm (38.9 in) long
Overall Flat Plate Dimensions - 7.26 cm (2.86 in) x 0.12 cm (0.065 in) x 64.8 cm (25.5 in) long
Overall Bent Plate Dimensions - varying widths x 0.12 cm ((0.065 in) x 64.8 cm (25.5 in) long
Active Portion of Plate: Dimensions - 7.87 cm (3.1 in) x 0.06 cm (0.025 in) x 61.0 cm (24 in) long; Composition - UAlx in aluminum matrix; 235U Enrichment - 93.0%
Clad: Composition - 1100 aluminum; Thickness - 0.05 cm (0.02 in) aluminum
Side Plates - 0.48 cm (.1875 in) aluminum (Al-6061-T6)
Structural Material - aluminum with some stainless steel pins
Difference between Mark I & II - Mark II has 14 plates (8 flat, 6 bent) with a 1.25" square hole in the element center

4 ARMF Capsules:
UAlx in an aluminum matrix; enrichments ~ 93.0%
Dimensions - 1.5" diameter x 5.75" long
NO ADDITIONAL INFORMATION ON THE CAPSULES IS AVAILABLE

28 ARMF Single Plates (possibly slightly irradiated):
Dimensions - Same dimensions as plate dimensions listed in standard Mark I elements.

Misc Plates:
Single (1) ATR flat plate - material composition is enriched uranium as UAlx clad fuel plate (may be slightly contaminated) enriched to >20% U-235. Plate is 22.5" x 3" x 0.125" (best information). There are also several met mounts (U metal in bakelite?).
Two (2) MIT plates - material composition is enriched uranium as UAlx (unirradiated) enriched to >20% U-235 with ~34g U-235 per plate.
Clad: Composition - Aluminum 606, ASTM B 209 clad on one side with alloy 1100.
Single (1) UTS plate - material composition is enriched uranium as UAlx standard plate (unirradiated) enriched to >20% U-235.
Single (1) LEAF plate - material composition is enriched uranium as UAlx plate (unirradiated) enriched to >20% U-235. Plate is 2" x 5".

Other Misc.:
Single (1) Lead Wire - material composition is enriched uranium as UAlx (unirradiated) enriched to >20% U-235.
Five (5) Foils - material composition is enriched uranium as UALx (unirradiated) enriched to >20% U-235.

History of Material: (including original purpose of the material and detailed historical information concerning processing, handling and storage of the material that may have caused contamination or adulteration of the material.)

The ARMF standard Mark I elements were originally manufactured for use in the ARMF reactor. Some records indicate the fuel is "slightly irradiated", but no record of actual irradiation can be located.
The individual ARMF plates were from disassembled ARMF elements or manufactured as single plates for specific experiments. Some records indicate the plates are "slightly irradiated", but no record of actual irradiation can be located.
Plates from elements AR-6 & AR-9 have been reassembled with 4 dummy plates per assembly.
The capsules were for reactivity measurement standards and contained various amounts of U-235.
The miscellaneous plates (ATR, MIT, LEAF and UTS) are unirradiated and were from either disassembled whole elements or manufactured as single plates for specific experiments. Records indicate the ATR plate was cut and may be contaminated.
Foils and lead wire were used in experiments for mapping flux spectrum across the ARMF reactor.

PACKAGING

General Description of Packaging (Inner to Outer)

Example:

Packaging that is in direct contact with material:	*Material (foil) in* **1-liter polybottle**
Next level of packaging:	*Polybottle in* **plastic bag**
Next level of packaging:	*Plastic bag in* **paint can**
Next level of packaging:	*Paint can in* **stainless steel 5-gallon can**
Next level of packaging:	N/A
Next level of packaging:	N/A
Shipping Container:	*5-gallon can in* **stainless steel 55-gallon drum with vermiculite**

For This Declaration:

Packaging that is in direct contact with material:	See "Packaging" Spreadsheet for packaging layers
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Shipping Container:	85-gallon DOT 6M / 55-gallon DOT Type A UN1A2

SHIPMENT

RIS location of material to be shipped from:	JSG
Name of Shipping Site Representative:	Max Heberling
Shipping Site Rep Phone Number:	(208) 533-4550
Shipping Method (commercial or government):	Commercial and/or Government

Form OR-658B (Rev 3/04)

IRRADIATION QUESTIONNAIRE AND CONCURRENCE STATEMENT

Declaration Number: ID-06-02

Is the material listed in this declaration irradiated? __Yes X No

If the material is not irradiated and has no known contaminants, please sign below as a confirmation.

I concur that the material described in this declaration is not irradiated and has no known contaminants resulting in discrete quantities of fission products or transuranic elements.

Shipping Site Representative **Printed Name:** Max Heberling

Shipping Site Representative **Signature:** M Heberling

Date: 3/29/06

If the material is irradiated or slightly irradiated, please complete the following questions.

When was the material **first** irradiated or made critical or subcritical? _____

How long did the material remain in this condition? _____

When was it **last** irradiated or made critical or subcritical? _____

How long did the material remain in this condition? _____

What was the neutron flux to which the material in question was subjected? _____

For how long? _____

For **metals**, what is the removable, alpha surface activity in dpm/100 cm^2 for each item:

a. attributed to transuranics (e.g., neptunium, plutonium, americium) _____

b. attributed to uranium

What is the alpha activity in curies per gram or multiples thereof for each alpha-emitting radionuclide? (Uranium alpha activity may be combined to yield a total uranium value with the exception of U-232 and U-233. Values for U-232 or U-233 should be included separately.)

_____

What is the beta activity in curies per gram or multiples thereof for each beta emitting radionuclide? (Uranium daughter beta activity may be combined to yield a total uranium value.)

_____

What is the gamma activity in curies per gram or multiples thereof for each gamma emitting radionuclide?

_____

What is the source of information/documentation for compiling your responses to the questions on this form?

_____

I concur that the information provided above regarding irradiated or slightly irradiated material is correct.

Shipping Site Representative **Printed Name:** _____

Shipping Site Representative **Signature:** _____

Date: _____

Form OR-658F (Rev 3/04)

NON-RCRA CERTIFICATION STATEMENT

"We certify according to process knowledge or thorough analytical determination that the contents of the containers in Declaration Request ID-06-02 do not contain Resource Conservation and Recovery Act (RCRA) Hazardous Waste as identified in 40 CFR 261.3."

Generator Site Name: CWI

Generator Site Representative Printed Name: D.P. Hutchison

Generator Site Representative Signature: D.P. Hutchison

Date of Signature: 4/4/06

Form OR-658G (Rev 3/04)

ARMF Fuel Details

ATTACHMENT 2

5/1/2006

Drum Number	Drum Type	Drum TID Number	Drum Total Uranium (grams)	Drum Total U-235 (grams)	H:X Ratio	Transport Index (TI)	Item Serial Number	NMIA ID	Item ID Number	COEI	ANSI	Project #	MT	MTC	Element (grams)	Isotope (grams)	Assay %	Description	Excess or National Security	Att. Level	Category	SFMB
TBD	55-Gallon UN1A2	TBD	351	327	N/A	TBD	CPSL 1	ID17402	19881	745	B10	EGD000000A	20	38	32	30	93.75	ARMF CAPSULE 1 FM	Excess	D	IV	Y
							CPSL 2	ID17401	19880	745	B10	EGD000000A	20	38	74	69	93.24	ARMF CAPSULE 2 FM	Excess	D	IV	Y
							CPSL 3	ID17400	19879	745	B10	EGD000000A	20	38	38	35	92.11	ARMF CAPSULE 3 FM	Excess	D	IV	Y
							CPSL 4	ID17399	19878	745	B10	EGD000000A	20	38	207	193	93.24	ARMF CAPSULE 4 FM	Excess	D	IV	Y
															351	327						
TBD	55-Gallon UN1A2	TBD	364	341	N/A	TBD	1028	ID17339	19818	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							1123	ID17332	19811	375	B11	J39AF95000	20	38	13	13	100.00	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							10 9	ID17618	20106	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							3 29	ID17331	19810	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							3 32	ID17333	19812	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							4 26	ID17334	19813	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							5 21	ID17329	19808	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							6 33	ID17330	19809	375	B11	J39AF95000	20	38	13	13	100.00	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							8 31	ID17319	19798	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-6	Excess	D	IV	Y
							10 5	ID17327	19806	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							2 16	ID17321	19800	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							2 48	ID17322	19801	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							3 19	ID17326	19805	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							5 2	ID17323	19802	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							6 37	ID17320	19799	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							6 49	ID17328	19807	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							6 5	ID17324	19803	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							8 41	ID17325	19804	375	B11	J39AF95000	20	38	13	12	92.31	ARMF PLATE FROM ELEMENT AR-9	Excess	D	IV	Y
							1 55	ID16834	19284	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							11 36	ID16827	19277	375	B11	EGD000000A	20	38	13	13	100.00	ARMF PLATE	Excess	D	IV	Y
							11 51	ID16829	19279	375	B11	EGD000000A	20	38	13	13	100.00	ARMF PLATE	Excess	D	IV	Y
							11 59	ID16835	19285	375	B11	EGD000000A	20	38	13	13	100.00	ARMF PLATE	Excess	D	IV	Y
							2 38	ID16833	19283	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							4 33	ID16832	19282	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							5 48	ID16830	19280	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							8 14	ID16826	19276	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							8 24	ID16828	19278	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
							8 52	ID16831	19281	375	B11	EGD000000A	20	38	13	12	92.31	ARMF PLATE	Excess	D	IV	Y
															364	341						
TBD	55-Gallon UN1A2	TBD	224	207	N/A	TBD	17GE063	ID17502	19990	385	B10	JEWG2D121F	20	38	71	66	92.96	ATR PLATE AND PIECES	Excess	C	IV	Y
							LEAF 1	ID16008	18458	771	B10	HEW2000000	20	37	8	7	87.50	UTS STD PLATE	Excess	C	IV	Y
							UALX	ID16745	19195	745	B11	JAJ0581030	20	37	9	8	88.89	UALX LEAD WIRE TRAY 79-4	National Security	C	IV	N
							E-122	ID16773	19223	774	B11	JAF4000000	20	35	8	3	37.50	LEAF PLATE TRAY 79-4	Excess	C	IV	Y
							26-013-01;26-013-09	ID16544	18994	774	B11	JAF4000000	20	38	73	68	93.15	MIT PLATES	Excess	C	IV	Y
							CAN 103	ID16771	19221	771	B11	EGD000000A	20	39	55	55	100.00	5 FOILS IN CAN #103 (ORL-414)	Excess	B	IV	Y
															224	207						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 1 B	ID17336	19815	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 10 B	ID17342	19821	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 12 B	ID17347	19826	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 13 B	ID17341	19820	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 14 B	ID17344	19823	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 17 B	ID17338	19817	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 19 B	ID17348	19827	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 2 B	ID17335	19814	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 26 B	ID17350	19829	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						
TBD	85-Gallon 6M	TBD	192	179	0	TBD	R 3 B	ID17349	19828	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Excess	D	IV	Y
															192	179						

ARMF Fuel Details

ATTACHMENT 2 (continued)

Drum Number	Drum Type	Drum TID Number	Drum Total Uranium (grams)	Drum Total U-235 (grams)	H:X Ratio	Transport Index (TI)	Iter	NMIA ID	Item ID Number	COEI	ANSI	Project #	MT	MTC	Element (grams)	Isotope (grams)	Assay %	Description	Excess or Sec
TBD	85-Gallon 6M	TBD	192	179	0	TBD		ID17345	19824	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Exc
															192	179			
TBD	85-Gallon 6M	TBD	192	179	0	TBD		ID17340	19819	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Exc
															192	179			
TBD	85-Gallon 6M	TBD	192	179	0	TBD		ID17343	19822	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Exc
															192	179			
TBD	85-Gallon 6M	TBD	192	179	0	TBD		ID17337	19816	375	B10	J39AF95000	20	38	192	179	93.23	ARMF ELEMENT	Exc
															192	179			
TBD	85-Gallon 6M	TBD	140	131	0	TBD		ID17346	19825	375	B10	J39AF95000	20	38	140	131	93.57	ARMF ELEMENT	Exc
															140	131			
OVERALL TOTAL															3767	3512			

ARMF Fuel
RadCon Measurements

ATTACHMENT 3

[redacted] 6/1/2006

Drum Number	Inner Container	Removable Surface Contamination on the Inner (Primary) Container (Alpha) dpm/100cm2	Removable Surface Contamination on the Inner (Primary) Container (Beta-Gamma) dpm/100cm2	Gamma Exposure @ 1 foot from Outer Surface of the Inner (Primary) Container (mR/hr)	Deep Dose (gamma + neutron @ 1 foot from the Inner (Primary) Container) (mrem/hr)	Item Serial Number	NET WEIGHT (unless specified otherwise) (grams)	TARE WEIGHT (grams)	GROSS WEIGHT (grams)	DIAMETER (width for square items) (inches)	LENGTH (inches)	THICKNESS (inches)	BETA CONTACT mr/hr	GAMMA CONTACT mr/hr	GAMMA @ 30cm mr/hr	GAMMA + NEUTRON @ 30 cm mr/hr	REMOVABLE ALPHA	REMOVABLE BETA/GAMMA	COMMENTS ON MATERIAL
TBD	TBD	TBD	TBD	TBD	TBD	CPSL 1	146.8			1.5	5.75		0.90	0.50	<0.5	<0.5	<20	<1000	
						CPSL 2	240.2			1.5	5.75		0.60	1.00	<0.5	<0.5	<20	<1000	
						CPSL 3	257.6			1.5	5.75		0.60	0.50	<0.5	<0.5	<20	<1000	
						CPSL 4	498.2			1.5	5.75		0.60	1.50	<0.5	<0.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	1028	236.2			3	25.5	0.065	50.0	2.5	2.5	0.0	<20	<1000	Plate from AR-6
						1123	235.8			3	25.5	0.065	60.0	2.0	1.5	0.0	<20	<1000	Plate from AR-6
						10 9	235.8			3	25.5	0.065	20.0	2.0	0.7	0.0	<20	<1000	Plate from AR-6
						3 29	237.9			3	25.5	0.065	30.0	2.0	1.0	0.0	<20	<1000	Plate from AR-6
						3 32	238.2			3	25.5	0.065	50.0	3.0	1.3	0.0	<20	<1000	Plate from AR-6
						4 26	235.1			3	25.5	0.065	60.0	3.0	1.5	0.0	<20	<1000	Plate from AR-6
						5 21	236.7			3	25.5	0.065	25.0	2.0	1.2	0.0	<20	<1000	Plate from AR-6
						6 33	239.9			3	25.5	0.065	25.0	1.2	0.8	0.0	<20	<1000	Plate from AR-6
						8 31	236.6			3	25.5	0.065	15.0	0.8	0.8	0.0	<20	<1000	Plate from AR-6
						10 5	237.2			3	25.5	0.065	40.0	0.4	0.3	0.0	<20	<1000	Plate from AR-9
						2 16	237.7			3	25.5	0.065	35.0	2.2	1.0	0.0	<20	<1000	Plate from AR-9
						2 48	238.7			3	25.5	0.065	40.0	5.0	2.0	0.0	<20	<1000	Plate from AR-9
						31 9	230.8			3	25.5	0.065	30.0	2.0	0.5	0.0	<20	<1000	Plate from AR-9
						5 2	234.9			3	25.5	0.065	34.0	1.5	1.0	0.0	<20	<1000	Plate from AR-9
						6 37	238.7			3	25.5	0.065	35.0	2.0	1.0	0.0	<20	<1000	Plate from AR-9
						6 49	239.1			3	25.5	0.065	36.0	0.5	0.4	0.0	<20	<1000	Plate from AR-9
						6 5	241.8			3	25.5	0.065	45.0	2.5	1.5	0.0	<20	<1000	Plate from AR-9
						8 41	236.1			3	25.5	0.065	25.0	0.4	0.4	0.0	<20	<1000	Plate from AR-9
						1 55	237.5			3	25.5	0.065	4.5	0.8	0.5	0.5	<20	<1000	
						11 36	233.9			3	25.5	0.065	171.9	2.7	0.7	0.7	<20	<1000	
						11 51	231.1			3	25.5	0.065	1.8	0.9	0.7	0.7	<20	<1000	
						11 59	233.8			3	25.5	0.065	1.8	0.9	0.6	0.6	<20	<1000	
						2 36	237.8			3	25.5	0.065	15.0	1.0	0.6	0.6	<20	<1000	
						4 33	235.5			3	25.5	0.065	141.5 ?	2.5	0.7	0.7	<20	<1000	
						5 48	238.1			3	25.5	0.065	156.9	2.7	0.8	0.8	<20	<1000	
						8 14	236.4			3	25.5	0.065	173.2	2.6	0.8	0.8	<20	<1000	
						8 24	238.6			3	25.5	0.065	115.0	0.9	0.6	0.6	<20	<1000	
						8 52	237.1			3	25.5	0.065	157.2	2.6	0.7	0.7	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	17GE063	455.6	97.7 (bag)	553.3	3	22.5		1.5	1.5	0.5	0.5	253	<1000	22 pieces: several small pieces attached to largest piece
	TBD	TBD	TBD	TBD	TBD	LEAF 1	Item not removed from bag for weighing		48.3 in bag	3	6	0.125??	2.1	0.6	<0.5	<0.5	<20	<1000	measured in bag
						UALX	129.4	8.7 (bag)	138.1	4	8		4.5	0.5	<0.5	<0.5	121	<1000	wire rolled up in a loop in a rad bag
						E-122	Item not removed from bag for weighing		34.8 in bag	2	5	0.125??	18.0	0.5	<0.5	<0.5	<20	<1000	measured in bag
	N/A	N/A	N/A	N/A	N/A	26-013-01	211.6			2.5	23	0.08	2.1	1.0	<0.5	<0.5	<20	<1000	
	N/A	N/A	N/A	N/A	N/A	26-013-09	211.7			2.5	23	0.08	2.1	1.0	<0.5	<0.5	<20	<1000	
	CAN 103	<20	<1000	<0.5	<0.5	CAN 103	Items not removed from can for weighing		369.3	4.5 (Can dimensions, not items)	5 (Can dimensions, not items)		<0.5 (OF CAN, NOT ITEM)	<0.5 (OF CAN, NOT ITEM)					Can
TBD	N/A	N/A	N/A	N/A	N/A	R 1 B	5452.9			3.25	39.125	3.25	375.0	25.0	3.0	3.0	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 10 B	5508.3			3.25	39.125	3.25	291.0	23.0	2.5	2.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 12 B	5485			3.25	39.125	3.25	273.0	19.0	2.0	2.0	<20	<1000	

ARMF Fuel
RadCon Measurements

ATTACHMENT 3 (CONTINUED)

[redacted] 6/1/2006

Drum Number	Inner Container	Removable Surface Contamination on the Inner (Primary) Container (Alpha) dpm/100cm2	Removable Surface Contamination on the Inner (Primary) Container (Beta-Gamma) dpm/100cm2	Gamma Exposure @ 1 foot from Outer Surface of the Inner (Primary) Container (mR/hr)	Deep Dose (gamma + neutron @ 1 foot from the Inner (Primary) Container) (mrem/hr)	Item Serial Number	NET WEIGHT (unless specified otherwise) (grams)	TARE WEIGHT (grams)	GROSS WEIGHT (grams)	DIAMETER (width for square items) (inches)	LENGTH (inches)	THICKNESS (inches)	BETA CONTACT mr/hr	GAMMA CONTACT mr/hr	GAMMA @ 30cm mr/hr	GAMMA + NEUTRON @ 30 cm mr/hr	REMOVABLE ALPHA	REMOVABLE BETA/GAMMA	COMMENTS ON MATERIAL
TBD	N/A	N/A	N/A	N/A	N/A	R 13 B	5467.4			3.25	39.125	3.25	132.0	11.0	1.5	1.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 14 B	5474			3.25	39.125	3.25	150.0	10.0	1.5	1.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 17 B	5492.7			3.25	39.125	3.25	303.0	19.0	1.8	1.8	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 19 B	5491			3.25	39.125	3.25	150.0	10.0	1.5	1.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 2 B	5503			3.25	39.125	3.25	345.0	25.0	3.0	3.0	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 26 B	5511			3.25	39.125	3.25	1.5	1.5	0.5	0.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 3 B	5506			3.25	39.125	3.25	1.5	1.5	0.5	0.5	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 4 B	5482.4			3.25	39.125	3.25	330.0	25.0	3.0	3.0	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 5 B	5479.9			3.25	39.125	3.25	1.5	1.5	0.6	0.6	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 6 B	5496.7			3.25	39.125	3.25	375.0	25.0	3.0	3.0	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	R 8 B	5504.1			3.25	39.125	3.25	1.5	1.5	0.6	0.6	<20	<1000	
TBD	N/A	N/A	N/A	N/A	N/A	S 4 B	4830.7			3.25	39.125	3.25	369.0	22.0	2.5	2.5	<20	<1000	

Drum Number	Serial Number	Packaging that is in direct contact with material	Next level of packaging	Next level of packaging	Next level of packaging	Inner (Primary) Container Serial/ID Number	Inner (Primary) Container Type	Inner (Primary) Container Size	Inner (Primary) Container Construction Material	Type of Lid Closure on Inner (Primary) Container	Outer Diameter of Inner (Primary) Container	Overall Height of Inner (Primary) Container (inches)	Packing Material Within Inner (Primary) Container
TBD	CPSL 1	2.5 Quart Carbon Steel Paint Can	Foam Packing	None		TBD	Paint Can	2.5 Quart	Carbon Steel	Paint Lid			None
	CPSL 2												
	CPSL 3												
	CPSL 4												
TBD	1028	These 9 plates will be bundled together. Held together with Metal Strap Binding	Foam Packing	None		N/A							
	1123												
	10 9												
	3 29												
	3 32												
	4 26												
	5 21												
	6 33												
	8 31												
	10 5	These 9 plates will be bundled together. Held together with Metal Strap Binding	Foam Packing	None		N/A							
	2 16												
	2 48												
	31 9												
	5 2												
	6 37												
	6 49												
	6 5												
	8 41												
	1 55	These 10 plates will be bundled together. Held together with Metal Strap Binding	Foam Packing	None		N/A							
	11 36												
	11 51												
	11 59												
	2 38												
	4 33												
	5 48												
	8 14												
	8 24												
	8 52												
TBD	17GE063	Plastic Bag	Foam Packing	None		N/A							
	LEAF 1	Plastic Bag	Plastic Bag in 2.5 Quart Carbon Steel Paint Can	Foam Packing	None	TBD	Paint Can	2.5 Quart	Carbon Steel	Paint Lid			None
	UALX	Plastic Bag											
	E-122	Plastic Bag											
	-013-01;26-013-	Two plates will be bundled together. Held together with Metal Strap Binding	Foam Packing	None		N/A							
	CAN 103	Plastic Bag?? (**Can was not opened for inspection**)	Liter Carbon Steel Paint Can	Foam Packing	None	CAN 103	Paint Can	1.3 liter	Carbon Steel	Paint Lid	4.5	5.0	None
TBD	R 1 B	Stainless Steel Sponges	None			N/A							
TBD	R 10 B	Stainless Steel Sponges	None			N/A							
TBD	R 12 B	Stainless Steel Sponges	None			N/A							
TBD	R 13 B	Stainless Steel Sponges	None			N/A							
TBD	R 14 B	Stainless Steel Sponges	None			N/A							
TBD	R 17 B	Stainless Steel Sponges	None			N/A							
TBD	R 19 B	Stainless Steel Sponges	None			N/A							
TBD	R 2 B	Stainless Steel Sponges	None			N/A							
TBD	R 26 B	Stainless Steel Sponges	None			N/A							
TBD	R 3 B	Stainless Steel Sponges	None			N/A							
TBD	R 4 B	Stainless Steel Sponges	None			N/A							
TBD	R 5 B	Stainless Steel Sponges	None			N/A							
TBD	R 6 B	Stainless Steel Sponges	None			N/A							
TBD	R 8 B	Stainless Steel Sponges	None			N/A							
TBD	S 4 B	Stainless Steel Sponges	None			N/A							

BR2 (Belgium)

IRRADIATION QUESTIONNAIRE AND CONCURRENCE STATEMENT

Declaration Number: CERCA-05-01

Is the material listed in this declaration irradiated?	X Yes ___ No

If the material is not irradiated and has no known contaminants, please sign below as a confirmation.

I concur that the material described in this declaration is not irradiated and has no known contaminants resulting in discrete quantities of fission products or transuranic elements.

Shipping Site Representative Printed Name: N/A

Shipping Site Representative Signature: _____

Date: _____

If the material is irradiated or slightly irradiated, please complete the following questions.

When was the material first irradiated or made critical or subcritical? Critical experiments were performed between 1960&1985

How long did the material remain in this condition? It is not a continuous irradiation campaign but small campagns every year.

When was it last irradiated or made critical or subcritical? 1985

How long did the material remain in this condition? Since 1985, the fuel are stored outside the pool.

What was the neutron flux to which the material in question was subject< 10^6 n/s/cm2

For how long? N/A

For metals, what is the removable, alpha surface activity in dpm/100 cm2 for each item:

a. attributed to transuranics (e.g., neptunium, plutonium, americium) N/A

b. attributed to uranium N/A

What is the alpha activity in curies per gram or multiples thereof for each alpha-emitting radionuclide? (Uranium alpha activity may be combined to yield a total uranium value with the exception of U-232 and U-233. Values for U-232 or U-233 should be included separately.)

Within CERCA Specification G160 Rev.6 (§ 4.3)

What is the beta activity in curies per gram or multiples thereof for each beta emitting radionuclide? (Uranium daughter beta activity may be combined to yield a total uranium value.)

Within CERCA Specification G160 Rev.6 (§ 4.4)

What is the gamma activity in curies per gram or multiples thereof for each gamma emitting radionuclide?

Within CERCA Specification G160 Rev.6. (§ 4.4)

What is the source of information/documentation for compiling your responses to the questions on this form?

Informations from the BR2 reactor and some analysis.

I concur that the information provided above regarding irradiated or slightly irradiated material is correct.

Shipping Site Representative Printed Name: OBADIA Franck

Shipping Site Representative Signature: _____

Date: 12 JANUARY, 2006

Form OR-658F (Rev 3/04)

MATERIAL DATA - Part 2

Declaration Number: CERCA-05-01

Material Data - Part 2

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number (Form OR-658E-1)	Project Number	Excess (E) or National Security (NS)	Category of Material (I, II, III, IV)	Attractiveness (A, B, C, D, E)	Beta Readings @ Contact with Material (µSv/hr)	Gamma Exposure @ 1 foot from Material (µSv/hr)	Deep Dose (gamma + neutron @ 1 foot from Material) (mrem/hr)	Irradiated (Y/N)
TBGC 1 1	N/A	Stack # G003	7BR2	NS	II	C	6	4	0.4	Y
TBGC 1 1	N/A	Stack # S277	7BR2	NS	II	C	18	6	0.6	Y
TBGC 1 2	N/A	Stack # M614	7BR2	NS	II	C	4	4	0.4	Y
TBGC 1 2	N/A	Stack # X 173	7BR2	NS	II	C	2	4	0.4	Y
TBGC 1 3	N/A	Stack # ATR213/1	7BR2	NS	II	C	4	4	0.4	Y
TBGC 1 3	N/A	Stack # ATR213/2	7BR2	NS	II	C	8	5	0.5	Y
TBGC 1 4	N/A	Stack # ATR213/3	7BR2	NS	II	C	2	3	0.3	Y
TBGC 1 4	N/A	Stack # ATR213/4	7BR2	NS	II	C	8	4	0.4	Y
TBGC 1 5	N/A	Stack # ATR213/5	7BR2	NS	II	C	6	4	0.4	Y
TBGC 1 5	N/A	Stack # ATR213/6	7BR2	NS	II	C	4	3	0.3	Y
TBGC 1 6	N/A	Stack # ATR213/7	7BR2	NS	II	C	6	5	0.5	Y
TBGC 1 6	N/A	Stack # ATR213/8	7BR2	NS	II	C	2	4	0.4	Y
TBGC 1 7	N/A	Stack # G901	7BR2	NS	II	C	20	6	0.6	Y
TBGC 1 7	N/A	Stack # G902	7BR2	NS	II	C	26	3	0.3	Y
TBGC 1 8	N/A	Stack # G903	7BR2	NS	II	C	32	6	0.6	Y
TBGC 1 8	N/A	Stack # G904	7BR2	NS	II	C	36	5	0.5	Y
TBGC 1 9	N/A	Stack # G905	7BR2	NS	II	C	38	6	0.6	Y
TBGC 1 9	N/A	Stack # G906	7BR2	NS	II	C	36	6	0.6	Y
TBGC 1 10	N/A	Stack # X132	7BR2	NS	II	C	6	4	0.4	Y
TBGC 1 10	N/A	Stack # MXC1	7BR2	NS	II	C	14	5	0.5	Y
TBGC 1 11	N/A	Stack # MXC2	7BR2	NS	II	C	36	6	0.6	Y
TBGC 1 11	N/A	Stack # MXC3	7BR2	NS	II	C	32	8	0.8	Y
TBGC 1 12	N/A	Stack # MXC4	7BR2	NS	II	C	32	7	0.7	Y
TBGC 1 12	N/A	Stack # MXC5	7BR2	NS	II	C	30	7	0.7	Y
TBGC 1 13	N/A	Stack # MXC6	7BR2	NS	II	C	32	5	0.5	Y
TBGC 1 13	N/A	Stack # MXC7	7BR2	NS	II	C	10	5	0.5	Y
TBGC 1 14	N/A	Stack # MXC8	7BR2	NS	II	C	14	6	0.6	Y
TBGC 1 14	N/A	Stack # MXC9	7BR2	NS	II	C	22	6	0.6	Y
TBGC 1 15	N/A	Stack # MXC10	7BR2	NS	II	C	12	6	0.6	Y
TBGC 1 15	N/A	Stack # MXC11	7BR2	NS	II	C	22	6	0.6	Y
TBGC 1 16	N/A	Stack # MXC12	7BR2	NS	II	C	18	6	0.6	Y
TBGC 1 16	N/A	Stack # MXC13	7BR2	NS	II	C	28	6	0.6	Y
TBGC 1 17	N/A	Stack # MXC14	7BR2	NS	II	C	40	10	1	Y
TBGC 1 17	N/A	Stack # MXC16	7BR2	NS	II	C	12	5	0.5	Y
TBGC 1 18	N/A	Stack # MXC18	7BR2	NS	II	C	8	4	0.4	Y
TBGC 1 18	N/A	Stack # MXC19	7BR2	NS	II	C	14	5	0.5	Y
TBGC 1 19	N/A	Stack # MXC20	7BR2	NS	II	C	56	7	0.7	Y
TBGC 1 19	N/A	Stack # X033	7BR2	NS	II	C	12	6	0.6	Y
TBGC 1 20	N/A	Stack # X035	7BR2	NS	II	C	20	6	0.6	Y
TBGC 1 20	N/A	Stack # X036	7BR2	NS	II	C	34	6	0.6	Y
TBGC 1 21	N/A	Stack # X127	7BR2	NS	II	C	34	7	0.7	Y
TBGC 1 21	N/A	Stack # X128	7BR2	NS	II	C	32	10	1	Y
TBGC 1 22	N/A	Stack # X129	7BR2	NS	II	C	28	7	0.7	Y
TBGC 1 22	N/A	Stack # X130	7BR2	NS	II	C	28	8	0.8	Y
TBGC 1 23	N/A	Stack # X131	7BR2	NS	II	C	24	6	0.6	Y
TBGC 1 23	N/A	Stack # X134	7BR2	NS	II	C	30	5	0.5	Y
TBGC 1 24	N/A	Stack # X135	7BR2	NS	II	C	6	4	0.4	Y
TBGC 1 24	N/A	Stack # X136	7BR2	NS	II	C	26	6	0.6	Y
TBGC 1 25	N/A	Stack # X137	7BR2	NS	II	C	16	6	0.6	Y
TBGC 1 25	N/A	Stack # X138	7BR2	NS	II	C	30	7	0.7	Y
TBGC 1 26	N/A	Stack # X139	7BR2	NS	II	C	22	6	0.6	Y
TBGC 1 26	N/A	Stack # X140	7BR2	NS	II	C	14	5	0.5	Y
TBGC 1 27	N/A	Stack # X141	7BR2	NS	II	C	14	5	0.5	Y
TBGC 1 27	N/A	Stack # X142	7BR2	NS	II	C	16	5	0.5	Y
TBGC 1 28	N/A	Stack # X143	7BR2	NS	II	C	12	5	0.5	Y
TBGC 1 28	N/A	Stack # X144	7BR2	NS	II	C	12	4	0.4	Y
TBGC 1 29	N/A	Stack # X145	7BR2	NS	II	C	12	5	0.5	Y
TBGC 1 29	N/A	Stack # X133	7BR2	NS	II	C	10	5	0.5	Y

MATERIAL DATA - Part 1

ration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 1	TN90	[illegible]	Please fill in	Plates FE N°G003 and S277		8020	699.12	0.900	620.52
TNBGC 1 2	TN90			Plates FE N°M614 and X173		6620	515.59	0.899	463.45
TNBGC 1 3	TN90			Plates FE N°ATR213/1 and ATR213/2		4623	562.09	0.899	505.49
TNBGC 1 4	TN90			Plates FE N°ATR213/3 and ATR213/4		4769	562.09	0.899	505.49
TNBGC 1 5	TN90			Plates FE N°ATR213/5 and ATR213/6		4780	562.09	0.899	505.49
TNBGC 1 6	TN90			Plates FE N°ATR213/7 and ATR213/8		4788	562.09	0.899	505.49
TNBGC 1 7	TN90			Plates FE N°G001 and G002		2480	319.82	0.899	287.57
TNBGC 1 8	TN90			Plates FE N°G003 and G004		2530	323.13	0.899	290.57
TNBGC 1 9	TN90			Plates FE N°G005 and G006		2422	309.04	0.899	277.89
TNBGC 1 10	TN90			Plates FE N°X132 and MXC1		7390	541.682	0.900	487.584
TNBGC 1 11	TN90			Plates FE N°MXC2 and MXC3		7380	545.184	0.898	489.33
TNBGC 1 12	TN90			Plates FE N°MXC4 and MXC5		7330	545.184	0.900	490.747
TNBGC 1 13	TN90			Plates FE N°MXC6 and MXC7		7242	545.184	0.897	489.275
TNBGC 1 14	TN90			Plates FE N°MXC8 and MXC9		7275	545.184	0.899	490.122
TNBGC 1 15	TN90			Plates FE N°MXC10 and MXC11		7280	545.184	0.897	489.139
TNBGC 1 16	TN90			Plates FE N°MXC12 and MXC13		7335	545.184	0.898	489.412
TNBGC 1 17	TN90			Plates FE N°MXC14 and MXC15		7308	545.184	0.895	487.829
TNBGC 1 18	TN90			Plates FE N°MXC18 and MXC19		7428	545.184	0.899	490.28
TNBGC 1 19	TN90			Plates FE N°MX20 and X033		7263	530.242	0.897	475.875
TNBGC 1 20	TN90			Plates FE N°X035 and X036		7335	533.55	0.897	478.75
TNBGC 1 21	TN90			Plates FE N°X127 and X128		7416	539.15	0.898	484.25
TNBGC 1 22	TN90			Plates FE N°X129 and X130		7345	535.35	0.898	480.65
TNBGC 1 23	TN90			Plates FE N°X131 and X134		7390	539.42	0.899	484.89
TNBGC 1 24	TN90			Plates FE N°X135 and X136		7329	532.95	0.899	479.08
TNBGC 1 25	TN90			Plates FE N°X137 and X138		7400	539.58	0.899	485.32
TNBGC 1 26	TN90			Plates FE N°X139 and X140		7432	536.21	0.900	482.36
TNBGC 1 27	TN90			Plates FE N°X141 and X142		7418	535.83	0.900	481.83
TNBGC 1 28	TN90			Plates FE N°X143 and X144		7480	538.78	0.900	484.71
TNBGC 1 29	TN90			Plates FE N°X145 and X133		7333	525.87	0.899	472.95
					Total on this page of Form OR-658E-1		15194.966		13656.342
					Grand Total on Form OR-658E-1 (all pages)		**15194.966**		**13656.342**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 29	TN90	X145 1	N/A	Fuel Plates		124	8.83	0.900	7.95
TNBGC 1 29	TN90	X145 2	N/A	Fuel Plates		127	9.04	0.900	8.14
TNBGC 1 29	TN90	X145 3	N/A	Fuel Plates		128	9.12	0.900	8.20
TNBGC 1 29	TN90	X145 4	N/A	Fuel Plates		163	11.61	0.900	10.44
TNBGC 1 29	TN90	X145 5	N/A	Fuel Plates		157	11.18	0.900	10.06
TNBGC 1 29	TN90	X145 6	N/A	Fuel Plates		158	11.25	0.900	10.12
TNBGC 1 29	TN90	X145 7	N/A	Fuel Plates		196	13.96	0.900	12.56
TNBGC 1 29	TN90	X145 8	N/A	Fuel Plates		194	13.82	0.900	12.43
TNBGC 1 29	TN90	X145 9	N/A	Fuel Plates		194	13.82	0.900	12.43
TNBGC 1 29	TN90	X145 10	N/A	Fuel Plates		226	16.10	0.900	14.48
TNBGC 1 29	TN90	X145 11	N/A	Fuel Plates		222	15.81	0.900	14.23
TNBGC 1 29	TN90	X145 12	N/A	Fuel Plates		222	15.81	0.900	14.23
TNBGC 1 29	TN90	X145 13	N/A	Fuel Plates		255	18.16	0.900	16.34
TNBGC 1 29	TN90	X145 14	N/A	Fuel Plates		248	17.66	0.900	15.89
TNBGC 1 29	TN90	X145 15	N/A	Fuel Plates		254	18.09	0.900	16.28
TNBGC 1 29	TN90	X145 16	N/A	Fuel Plates		286	20.37	0.900	18.33
TNBGC 1 29	TN90	X145 17	N/A	Fuel Plates		291	20.72	0.900	18.65
TNBGC 1 29	TN90	X145 18	N/A	Fuel Plates		289	20.58	0.900	18.52
TNBGC 1 29	TN90	X133 1	N/A	Fuel Plates		124	8.96	0.899	8.06
TNBGC 1 29	TN90	X133 2	N/A	Fuel Plates		125	9.03	0.899	8.12
TNBGC 1 29	TN90	X133 3	N/A	Fuel Plates		159	11.49	0.899	10.33
GC 1 29	TN90	X133 4	N/A	Fuel Plates		155	11.20	0.899	10.07
GC 1 29	TN90	X133 5	N/A	Fuel Plates		157	11.35	0.899	10.20
TNBGC 1 29	TN90	X133 6	N/A	Fuel Plates		192	13.88	0.899	12.47
TNBGC 1 29	TN90	X133 7	N/A	Fuel Plates		192	13.88	0.899	12.47
TNBGC 1 29	TN90	X133 8	N/A	Fuel Plates		192	13.88	0.899	12.47
TNBGC 1 29	TN90	X133 9	N/A	Fuel Plates		223	16.12	0.899	14.49
TNBGC 1 29	TN90	X133 10	N/A	Fuel Plates		226	16.33	0.899	14.68
TNBGC 1 29	TN90	X133 11	N/A	Fuel Plates		222	16.04	0.899	14.42
TNBGC 1 29	TN90	X133 12	N/A	Fuel Plates		253	18.28	0.899	16.44
TNBGC 1 29	TN90	X133 13	N/A	Fuel Plates		254	18.35	0.899	16.50
TNBGC 1 29	TN90	X133 14	N/A	Fuel Plates		256	18.64	0.899	16.76
TNBGC 1 29	TN90	X133 15	N/A	Fuel Plates		287	20.74	0.899	18.65
TNBGC 1 29	TN90	X133 16	N/A	Fuel Plates		289	20.88	0.899	18.77
TNBGC 1 29	TN90	X133 17	N/A	Fuel Plates		289	20.88	0.899	18.77
				Total on this page of Form OR-658E-1			525.87		472.95
				Grand Total on Form OR-658E-1 (all pages)			**525.87**		**472.95**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

aration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 28	TN90	X143 1	N/A	Fuel Plates		124	8.92	0.900	8.03
TNBGC 1 28	TN90	X143 2	N/A	Fuel Plates		124	8.92	0.900	8.03
TNBGC 1 28	TN90	X143 3	N/A	Fuel Plates		125	9.00	0.900	8.09
TNBGC 1 28	TN90	X143 4	N/A	Fuel Plates		162	11.66	0.900	10.49
TNBGC 1 28	TN90	X143 5	N/A	Fuel Plates		159	11.44	0.900	10.29
TNBGC 1 28	TN90	X143 6	N/A	Fuel Plates		163	11.73	0.900	10.55
TNBGC 1 28	TN90	X143 7	N/A	Fuel Plates		192	13.82	0.900	12.43
TNBGC 1 28	TN90	X143 8	N/A	Fuel Plates		192	13.82	0.900	12.43
TNBGC 1 28	TN90	X143 9	N/A	Fuel Plates		194	13.96	0.900	12.56
TNBGC 1 28	TN90	X143 10	N/A	Fuel Plates		226	16.26	0.900	14.63
TNBGC 1 28	TN90	X143 11	N/A	Fuel Plates		226	16.26	0.900	14.63
TNBGC 1 28	TN90	X143 12	N/A	Fuel Plates		226	16.26	0.900	14.63
TNBGC 1 28	TN90	X143 13	N/A	Fuel Plates		255	18.35	0.900	16.51
TNBGC 1 28	TN90	X143 14	N/A	Fuel Plates		253	18.21	0.900	16.38
TNBGC 1 28	TN90	X143 15	N/A	Fuel Plates		255	18.35	0.900	16.51
TNBGC 1 28	TN90	X143 16	N/A	Fuel Plates		290	20.87	0.900	18.77
TNBGC 1 28	TN90	X143 17	N/A	Fuel Plates		288	20.73	0.900	18.64
TNBGC 1 28	TN90	X143 18	N/A	Fuel Plates		287	20.65	0.900	18.58
TNBGC 1 28	TN90	X144 1	N/A	Fuel Plates		124	8.91	0.900	8.02
TNBGC 1 28	TN90	X144 2	N/A	Fuel Plates		128	9.20	0.900	8.28
TNBGC 1 28	TN90	X144 3	N/A	Fuel Plates		126	9.06	0.900	8.15
TNBGC 1 28	TN90	X144 4	N/A	Fuel Plates		161	11.57	0.900	10.41
TNBGC 1 28	TN90	X144 5	N/A	Fuel Plates		160	11.50	0.900	10.35
TNBGC 1 28	TN90	X144 6	N/A	Fuel Plates		161	11.57	0.900	10.41
TNBGC 1 28	TN90	X144 7	N/A	Fuel Plates		193	13.87	0.900	12.48
TNBGC 1 28	TN90	X144 8	N/A	Fuel Plates		196	14.09	0.900	12.68
TNBGC 1 28	TN90	X144 9	N/A	Fuel Plates		192	13.80	0.900	12.42
TNBGC 1 28	TN90	X144 10	N/A	Fuel Plates		226	16.25	0.900	14.62
TNBGC 1 28	TN90	X144 11	N/A	Fuel Plates		226	16.25	0.900	14.62
TNBGC 1 28	TN90	X144 12	N/A	Fuel Plates		225	16.17	0.900	14.56
TNBGC 1 28	TN90	X144 13	N/A	Fuel Plates		257	18.47	0.900	16.62
TNBGC 1 28	TN90	X144 14	N/A	Fuel Plates		255	18.33	0.900	16.49
TNBGC 1 28	TN90	X144 15	N/A	Fuel Plates		255	18.33	0.900	16.49
TNBGC 1 28	TN90	X144 16	N/A	Fuel Plates		289	20.77	0.900	18.69
TNBGC 1 28	TN90	X144 17	N/A	Fuel Plates		289	20.77	0.900	18.69
TNBGC 1 28	TN90	X144 18	N/A	Fuel Plates		287	20.63	0.900	18.56
						Total on this page of Form OR-658E-1	538.78		484.71
						Grand Total on Form OR-658E-1 (all pages)	**538.78**		**484.71**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-668C-1)	Inner (Primary) Container Serial/ID Number (Form OR-668D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 27	TN90	X141 1	N/A	Fuel Plates		126	9.06	0.899	8.15
TNBGC 1 27	TN90	X141 2	N/A	Fuel Plates		126	9.06	0.899	8.15
TNBGC 1 27	TN90	X141 3	N/A	Fuel Plates		126	9.06	0.899	8.15
TNBGC 1 27	TN90	X141 4	N/A	Fuel Plates		161	11.58	0.899	10.42
TNBGC 1 27	TN90	X141 5	N/A	Fuel Plates		159	11.44	0.899	10.29
TNBGC 1 27	TN90	X141 6	N/A	Fuel Plates		161	11.58	0.899	10.42
TNBGC 1 27	TN90	X141 7	N/A	Fuel Plates		197	13.81	0.899	12.42
TNBGC 1 27	TN90	X141 8	N/A	Fuel Plates		193	13.88	0.899	12.49
TNBGC 1 27	TN90	X141 9	N/A	Fuel Plates		191	13.74	0.899	12.36
TNBGC 1 27	TN90	X141 10	N/A	Fuel Plates		228	16.40	0.899	14.75
TNBGC 1 27	TN90	X141 11	N/A	Fuel Plates		225	16.18	0.899	14.56
TNBGC 1 27	TN90	X141 12	N/A	Fuel Plates		226	16.26	0.899	14.62
TNBGC 1 27	TN90	X141 13	N/A	Fuel Plates		253	18.20	0.899	16.37
TNBGC 1 27	TN90	X141 14	N/A	Fuel Plates		255	18.34	0.899	16.50
TNBGC 1 27	TN90	X141 15	N/A	Fuel Plates		252	18.13	0.899	16.30
TNBGC 1 27	TN90	X141 16	N/A	Fuel Plates		289	20.79	0.899	18.70
TNBGC 1 27	TN90	X141 17	N/A	Fuel Plates		286	20.57	0.899	18.50
TNBGC 1 27	TN90	X141 18	N/A	Fuel Plates		286	20.57	0.899	18.50
TNBGC 1 27	TN90	X142 1	N/A	Fuel Plates		128	9.19	0.900	8.27
TNBGC 1 27	TN90	X142 2	N/A	Fuel Plates		128	9.12	0.900	8.21
TNBGC 1 27	TN90	X142 3	N/A	Fuel Plates		130	9.26	0.900	8.33
BGC 1 27	TN90	X142 4	N/A	Fuel Plates		158	11.33	0.900	10.19
GC 1 27	TN90	X142 5	N/A	Fuel Plates		160	11.40	0.900	10.26
TNBGC 1 27	TN90	X142 6	N/A	Fuel Plates		160	11.40	0.900	10.26
TNBGC 1 27	TN90	X142 7	N/A	Fuel Plates		192	13.68	0.900	12.31
TNBGC 1 27	TN90	X142 8	N/A	Fuel Plates		193	13.75	0.900	12.37
TNBGC 1 27	TN90	X142 9	N/A	Fuel Plates		193	13.75	0.900	12.37
TNBGC 1 27	TN90	X142 10	N/A	Fuel Plates		229	16.32	0.900	14.68
TNBGC 1 27	TN90	X142 11	N/A	Fuel Plates		230	16.39	0.900	14.74
TNBGC 1 27	TN90	X142 12	N/A	Fuel Plates		225	16.03	0.900	14.42
TNBGC 1 27	TN90	X142 13	N/A	Fuel Plates		253	18.03	0.900	16.22
TNBGC 1 27	TN90	X142 14	N/A	Fuel Plates		255	18.17	0.900	16.35
TNBGC 1 27	TN90	X142 15	N/A	Fuel Plates		251	17.88	0.900	16.09
TNBGC 1 27	TN90	X142 16	N/A	Fuel Plates		286	20.38	0.900	18.33
TNBGC 1 27	TN90	X142 17	N/A	Fuel Plates		286	20.38	0.900	18.33
TNBGC 1 27	TN90	X142 18	N/A	Fuel Plates		288	20.52	0.900	18.46
						Total on this page of Form OR-668E-1	535.63		481.84
						Grand Total on Form OR-668E-1 (all pages)	**535.63**		**481.84**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

ration Number: CERCA_05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 26	TN90	X139 1	N/A	Fuel Plates		125	9.00	0.900	8.10
TNBGC 1 26	TN90	X139 2	N/A	Fuel Plates		125	9.00	0.900	8.10
TNBGC 1 26	TN90	X139 3	N/A	Fuel Plates		123	8.86	0.900	7.97
TNBGC 1 26	TN90	X139 4	N/A	Fuel Plates		161	11.59	0.900	10.43
TNBGC 1 26	TN90	X139 5	N/A	Fuel Plates		161	11.59	0.900	10.43
TNBGC 1 26	TN90	X139 6	N/A	Fuel Plates		161	11.59	0.900	10.43
TNBGC 1 26	TN90	X139 7	N/A	Fuel Plates		193	13.90	0.900	12.50
TNBGC 1 26	TN90	X139 8	N/A	Fuel Plates		193	13.90	0.900	12.50
TNBGC 1 26	TN90	X139 9	N/A	Fuel Plates		192	13.83	0.900	12.44
TNBGC 1 26	TN90	X139 10	N/A	Fuel Plates		225	16.20	0.900	14.58
TNBGC 1 26	TN90	X139 11	N/A	Fuel Plates		223	16.06	0.900	14.45
TNBGC 1 26	TN90	X139 12	N/A	Fuel Plates		225	16.20	0.900	14.58
TNBGC 1 26	TN90	X139 13	N/A	Fuel Plates		250	18.00	0.900	16.20
TNBGC 1 26	TN90	X139 14	N/A	Fuel Plates		249	17.93	0.900	16.13
TNBGC 1 26	TN90	X139 15	N/A	Fuel Plates		252	18.15	0.900	16.33
TNBGC 1 26	TN90	X139 16	N/A	Fuel Plates		286	20.60	0.900	18.53
TNBGC 1 26	TN90	X139 17	N/A	Fuel Plates		284	20.45	0.900	18.40
TNBGC 1 26	TN90	X139 18	N/A	Fuel Plates		285	20.52	0.900	18.46
TNBGC 1 26	TN90	X140 1	N/A	Fuel Plates		125	9.01	0.900	8.11
TNBGC 1 26	TN90	X140 2	N/A	Fuel Plates		126	9.08	0.900	8.17
TNBGC 1 26	TN90	X140 3	N/A	Fuel Plates		126	9.08	0.900	8.17
TNBGC 1 26	TN90	X140 4	N/A	Fuel Plates		161	11.61	0.900	10.44
TNBGC 1 26	TN90	X140 5	N/A	Fuel Plates		160	11.53	0.900	10.38
TNBGC 1 26	TN90	X140 6	N/A	Fuel Plates		159	11.46	0.900	10.31
TNBGC 1 26	TN90	X140 7	N/A	Fuel Plates		191	13.77	0.900	12.39
TNBGC 1 26	TN90	X140 8	N/A	Fuel Plates		191	13.77	0.900	12.39
TNBGC 1 26	TN90	X140 9	N/A	Fuel Plates		192	13.84	0.900	12.45
TNBGC 1 26	TN90	X140 10	N/A	Fuel Plates		225	16.22	0.900	14.59
TNBGC 1 26	TN90	X140 11	N/A	Fuel Plates		228	16.29	0.900	14.66
TNBGC 1 26	TN90	X140 12	N/A	Fuel Plates		226	16.28	0.900	14.66
TNBGC 1 26	TN90	X140 13	N/A	Fuel Plates		252	18.17	0.900	16.34
TNBGC 1 26	TN90	X140 14	N/A	Fuel Plates		252	18.17	0.900	16.34
TNBGC 1 26	TN90	X140 15	N/A	Fuel Plates		255	18.38	0.900	16.54
TNBGC 1 26	TN90	X140 16	N/A	Fuel Plates		286	20.76	0.900	18.68
TNBGC 1 26	TN90	X140 17	N/A	Fuel Plates		287	20.69	0.900	18.61
TNBGC 1 26	TN90	X140 18	N/A	Fuel Plates		287	20.69	0.900	18.61
						Total on this page of Form OR-658E-1	536.21		482.36
						Grand Total on Form OR-658E-1 (all pages)	**536.21**		**482.36**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

Declaration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 25	TN90	X137 1	N/A	Fuel Plates		125	9.02	0.899	8.12
TNBGC 1 25	TN90	X137 2	N/A	Fuel Plates		125	9.02	0.899	8.12
TNBGC 1 25	TN90	X137 3	N/A	Fuel Plates		126	9.10	0.899	8.18
TNBGC 1 25	TN90	X137 4	N/A	Fuel Plates		161	11.62	0.899	10.45
TNBGC 1 25	TN90	X137 5	N/A	Fuel Plates		159	11.48	0.899	10.32
TNBGC 1 25	TN90	X137 6	N/A	Fuel Plates		160	11.55	0.899	10.39
TNBGC 1 25	TN90	X137 7	N/A	Fuel Plates		189	13.65	0.899	12.27
TNBGC 1 25	TN90	X137 8	N/A	Fuel Plates		191	13.79	0.899	12.40
TNBGC 1 25	TN90	X137 9	N/A	Fuel Plates		191	13.79	0.899	12.40
TNBGC 1 25	TN90	X137 10	N/A	Fuel Plates		223	16.10	0.899	14.48
TNBGC 1 25	TN90	X137 11	N/A	Fuel Plates		226	16.32	0.899	14.67
TNBGC 1 25	TN90	X137 12	N/A	Fuel Plates		223	16.10	0.899	14.48
TNBGC 1 25	TN90	X137 13	N/A	Fuel Plates		254	18.34	0.899	16.49
TNBGC 1 25	TN90	X137 14	N/A	Fuel Plates		256	18.48	0.899	16.62
TNBGC 1 25	TN90	X137 15	N/A	Fuel Plates		255	18.41	0.899	16.56
TNBGC 1 25	TN90	X137 16	N/A	Fuel Plates		289	20.87	0.899	18.76
TNBGC 1 25	TN90	X137 17	N/A	Fuel Plates		288	20.79	0.899	18.70
TNBGC 1 25	TN90	X137 18	N/A	Fuel Plates		286	20.65	0.899	18.57
TNBGC 1 25	TN90	X138 1	N/A	Fuel Plates		125	9.13	0.900	8.21
TNBGC 1 25	TN90	X138 2	N/A	Fuel Plates		125	9.13	0.900	8.21
TNBGC 1 25	TN90	X138 3	N/A	Fuel Plates		126	9.20	0.900	8.28
TNBGC 1 25	TN90	X138 4	N/A	Fuel Plates		161	11.75	0.900	10.57
TNBGC 1 25	TN90	X138 5	N/A	Fuel Plates		159	11.61	0.900	10.44
TNBGC 1 25	TN90	X138 6	N/A	Fuel Plates		158	11.54	0.900	10.38
TNBGC 1 25	TN90	X138 7	N/A	Fuel Plates		189	13.80	0.900	12.41
TNBGC 1 25	TN90	X138 8	N/A	Fuel Plates		188	13.73	0.900	12.35
TNBGC 1 25	TN90	X138 9	N/A	Fuel Plates		187	13.65	0.900	12.28
TNBGC 1 25	TN90	X138 10	N/A	Fuel Plates		225	16.43	0.900	14.78
TNBGC 1 25	TN90	X138 11	N/A	Fuel Plates		224	16.35	0.900	14.71
TNBGC 1 25	TN90	X138 12	N/A	Fuel Plates		224	16.35	0.900	14.71
TNBGC 1 25	TN90	X138 13	N/A	Fuel Plates		254	18.55	0.900	16.68
TNBGC 1 25	TN90	X138 14	N/A	Fuel Plates		250	18.25	0.900	16.42
TNBGC 1 25	TN90	X138 15	N/A	Fuel Plates		250	18.25	0.900	16.42
TNBGC 1 25	TN90	X138 16	N/A	Fuel Plates		289	21.10	0.900	18.98
TNBGC 1 25	TN90	X138 17	N/A	Fuel Plates		285	20.81	0.900	18.72
TNBGC 1 25	TN90	X138 18	N/A	Fuel Plates		286	20.88	0.900	18.79
				Total on this page of Form OR-658E-1			539.59		485.32
				Grand Total on Form OR-658E-1 (all pages)			**539.59**		**485.32**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **aration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (If applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 24	TN90	X135 1	N/A	Fuel Plates		125	9.05	0.899	8.14
TNBGC 1 24	TN90	X135 2	N/A	Fuel Plates		124	8.98	0.899	8.07
TNBGC 1 24	TN90	X135 3	N/A	Fuel Plates		158	11.44	0.899	10.28
TNBGC 1 24	TN90	X135 4	N/A	Fuel Plates		160	11.58	0.899	10.41
TNBGC 1 24	TN90	X135 5	N/A	Fuel Plates		159	11.51	0.899	10.35
TNBGC 1 24	TN90	X135 6	N/A	Fuel Plates		191	13.83	0.899	12.43
TNBGC 1 24	TN90	X135 7	N/A	Fuel Plates		191	13.83	0.899	12.43
TNBGC 1 24	TN90	X135 8	N/A	Fuel Plates		192	13.90	0.899	12.50
TNBGC 1 24	TN90	X135 9	N/A	Fuel Plates		219	15.86	0.899	14.25
TNBGC 1 24	TN90	X135 10	N/A	Fuel Plates		225	16.29	0.899	14.64
TNBGC 1 24	TN90	X135 11	N/A	Fuel Plates		223	16.15	0.899	14.51
TNBGC 1 24	TN90	X135 12	N/A	Fuel Plates		254	18.39	0.899	16.53
TNBGC 1 24	TN90	X135 13	N/A	Fuel Plates		257	18.61	0.899	16.73
TNBGC 1 24	TN90	X135 14	N/A	Fuel Plates		255	18.46	0.899	16.60
TNBGC 1 24	TN90	X135 15	N/A	Fuel Plates		287	20.78	0.899	18.68
TNBGC 1 24	TN90	X135 16	N/A	Fuel Plates		290	21.00	0.899	18.87
TNBGC 1 24	TN90	X135 17	N/A	Fuel Plates		292	21.14	0.899	19.00
TNBGC 1 24	TN90	X136 1	N/A	Fuel Plates		125	9.13	0.889	8.20
TNBGC 1 24	TN90	X136 2	N/A	Fuel Plates		127	9.27	0.899	8.33
TNBGC 1 24	TN90	X136 3	N/A	Fuel Plates		126	9.20	0.899	8.27
TNBGC 1 24	TN90	X136 4	N/A	Fuel Plates		160	11.68	0.899	10.50
TNBGC 1 24	TN90	X136 5	N/A	Fuel Plates		161	11.75	0.899	10.57
TNBGC 1 24	TN90	X136 6	N/A	Fuel Plates		161	11.75	0.899	10.57
TNBGC 1 24	TN90	X136 7	N/A	Fuel Plates		192	14.02	0.899	12.60
TNBGC 1 24	TN90	X136 8	N/A	Fuel Plates		193	14.09	0.899	12.67
TNBGC 1 24	TN90	X136 9	N/A	Fuel Plates		191	13.94	0.899	12.53
TNBGC 1 24	TN90	X136 10	N/A	Fuel Plates		219	15.99	0.899	14.37
TNBGC 1 24	TN90	X136 11	N/A	Fuel Plates		221	16.13	0.899	14.50
TNBGC 1 24	TN90	X136 12	N/A	Fuel Plates		220	16.06	0.899	14.44
TNBGC 1 24	TN90	X136 13	N/A	Fuel Plates		254	18.54	0.899	16.67
TNBGC 1 24	TN90	X136 14	N/A	Fuel Plates		253	18.47	0.899	16.60
TNBGC 1 24	TN90	X136 15	N/A	Fuel Plates		254	18.54	0.899	16.67
TNBGC 1 24	TN90	X136 16	N/A	Fuel Plates		291	21.24	0.899	19.10
TNBGC 1 24	TN90	X136 17	N/A	Fuel Plates		290	21.17	0.899	19.03
TNBGC 1 24	TN90	X136 18	N/A	Fuel Plates		290	21.17	0.899	19.03
						Total on this page of Form OR-658E-1	532.95		479.08
						Grand Total on Form OR-658E-1 (all pages)	**532.95**		479.08

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-668C-1)	Inner (Primary) Container Serial/ID Number (Form OR-668D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 23	TN90	X131 1	N/A	Fuel Plates		125	9.05	0.899	8.16
TNBGC 1 23	TN90	X131 2	N/A	Fuel Plates		123	8.93	0.899	8.03
TNBGC 1 23	TN90	X131 3	N/A	Fuel Plates		124	9.00	0.899	8.09
TNBGC 1 23	TN90	X131 4	N/A	Fuel Plates		162	11.76	0.899	10.57
TNBGC 1 23	TN90	X131 5	N/A	Fuel Plates		161	11.69	0.899	10.51
TNBGC 1 23	TN90	X131 6	N/A	Fuel Plates		160	11.62	0.899	10.44
TNBGC 1 23	TN90	X131 7	N/A	Fuel Plates		169	13.72	0.899	12.34
TNBGC 1 23	TN90	X131 8	N/A	Fuel Plates		191	13.87	0.899	12.47
TNBGC 1 23	TN90	X131 9	N/A	Fuel Plates		190	13.79	0.899	12.40
TNBGC 1 23	TN90	X131 10	N/A	Fuel Plates		221	16.04	0.899	14.42
TNBGC 1 23	TN90	X131 11	N/A	Fuel Plates		218	15.83	0.899	14.23
TNBGC 1 23	TN90	X131 12	N/A	Fuel Plates		217	15.75	0.899	14.16
TNBGC 1 23	TN90	X131 13	N/A	Fuel Plates		254	18.44	0.899	16.58
TNBGC 1 23	TN90	X131 14	N/A	Fuel Plates		255	18.51	0.899	16.64
TNBGC 1 23	TN90	X131 15	N/A	Fuel Plates		253	18.37	0.899	16.51
TNBGC 1 23	TN90	X131 16	N/A	Fuel Plates		288	20.91	0.899	18.80
TNBGC 1 23	TN90	X131 17	N/A	Fuel Plates		289	20.98	0.899	18.86
TNBGC 1 23	TN90	X131 18	N/A	Fuel Plates		289	20.98	0.899	18.86
TNBGC 1 23	TN90	X134 1	N/A	Fuel Plates		124	9.00	0.899	8.09
TNBGC 1 23	TN90	X134 2	N/A	Fuel Plates		122	8.85	0.898	7.95
TNBGC 1 23	TN90	X134 3	N/A	Fuel Plates		123	8.93	0.898	8.02
TNBGC 1 23	TN90	X134 4	N/A	Fuel Plates		159	11.54	0.898	10.37
TNBGC 1 23	TN90	X134 5	N/A	Fuel Plates		161	11.69	0.898	10.50
TNBGC 1 23	TN90	X134 6	N/A	Fuel Plates		157	11.39	0.898	10.24
TNBGC 1 23	TN90	X134 7	N/A	Fuel Plates		192	13.94	0.898	12.53
TNBGC 1 23	TN90	X134 8	N/A	Fuel Plates		192	13.94	0.898	12.53
TNBGC 1 23	TN90	X134 9	N/A	Fuel Plates		194	14.09	0.898	12.66
TNBGC 1 23	TN90	X134 10	N/A	Fuel Plates		224	16.26	0.898	14.61
TNBGC 1 23	TN90	X134 11	N/A	Fuel Plates		224	16.26	0.898	14.61
TNBGC 1 23	TN90	X134 12	N/A	Fuel Plates		225	16.33	0.898	14.69
TNBGC 1 23	TN90	X134 13	N/A	Fuel Plates		256	18.58	0.898	16.70
TNBGC 1 23	TN90	X134 14	N/A	Fuel Plates		256	18.58	0.898	16.70
TNBGC 1 23	TN90	X134 15	N/A	Fuel Plates		252	18.29	0.898	16.44
TNBGC 1 23	TN90	X134 16	N/A	Fuel Plates		289	20.98	0.898	18.85
TNBGC 1 23	TN90	X134 17	N/A	Fuel Plates		287	20.83	0.898	18.72
TNBGC 1 23	TN90	X134 18	N/A	Fuel Plates		285	20.69	0.898	18.59
					Total on this page of Form OR-668E-1		539.42		484.88
					Grand Total on Form OR-668E-1 (all pages)		**539.42**		**484.88**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

ration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 22	TN90	X129 1	N/A	Fuel Plates		125	9.07	0.898	8.14
TNBGC 1 22	TN90	X129 2	N/A	Fuel Plates		126	9.14	0.898	8.21
TNBGC 1 22	TN90	X129 3	N/A	Fuel Plates		127	9.22	0.898	8.27
TNBGC 1 22	TN90	X129 4	N/A	Fuel Plates		160	11.61	0.898	10.42
TNBGC 1 22	TN90	X129 5	N/A	Fuel Plates		161	11.68	0.898	10.49
TNBGC 1 22	TN90	X129 6	N/A	Fuel Plates		162	11.76	0.898	10.55
TNBGC 1 22	TN90	X129 7	N/A	Fuel Plates		188	13.64	0.898	12.25
TNBGC 1 22	TN90	X129 8	N/A	Fuel Plates		189	13.71	0.898	12.31
TNBGC 1 22	TN90	X129 9	N/A	Fuel Plates		190	13.79	0.898	12.38
TNBGC 1 22	TN90	X129 10	N/A	Fuel Plates		223	16.18	0.898	14.53
TNBGC 1 22	TN90	X129 11	N/A	Fuel Plates		216	15.67	0.898	14.07
TNBGC 1 22	TN90	X129 12	N/A	Fuel Plates		217	15.75	0.898	14.14
TNBGC 1 22	TN90	X129 13	N/A	Fuel Plates		252	18.29	0.898	16.42
TNBGC 1 22	TN90	X129 14	N/A	Fuel Plates		251	18.21	0.898	16.35
TNBGC 1 22	TN90	X129 15	N/A	Fuel Plates		248	18.00	0.898	16.16
TNBGC 1 22	TN90	X129 16	N/A	Fuel Plates		290	21.04	0.898	18.89
TNBGC 1 22	TN90	X129 17	N/A	Fuel Plates		288	20.90	0.898	18.76
TNBGC 1 22	TN90	X129 18	N/A	Fuel Plates		287	20.83	0.898	18.70
TNBGC 1 22	TN90	X130 1	N/A	Fuel Plates		125	9.05	0.898	8.12
TNBGC 1 22	TN90	X130 2	N/A	Fuel Plates		124	8.98	0.898	8.06
TNBGC 1 22	TN90	X130 3	N/A	Fuel Plates		124	8.98	0.898	8.06
TNBGC 1 22	TN90	X130 4	N/A	Fuel Plates		160	11.58	0.898	10.40
TNBGC 1 22	TN90	X130 5	N/A	Fuel Plates		159	11.51	0.898	10.33
TNBGC 1 22	TN90	X130 6	N/A	Fuel Plates		158	11.44	0.898	10.27
TNBGC 1 22	TN90	X130 7	N/A	Fuel Plates		190	13.76	0.898	12.35
TNBGC 1 22	TN90	X130 8	N/A	Fuel Plates		189	13.61	0.898	12.22
TNBGC 1 22	TN90	X130 9	N/A	Fuel Plates		189	13.69	0.898	12.28
TNBGC 1 22	TN90	X130 10	N/A	Fuel Plates		218	15.64	0.898	14.04
TNBGC 1 22	TN90	X130 11	N/A	Fuel Plates		220	15.93	0.898	14.30
TNBGC 1 22	TN90	X130 12	N/A	Fuel Plates		218	15.78	0.898	14.17
TNBGC 1 22	TN90	X130 13	N/A	Fuel Plates		253	18.32	0.898	16.44
TNBGC 1 22	TN90	X130 14	N/A	Fuel Plates		252	18.24	0.898	16.38
TNBGC 1 22	TN90	X130 15	N/A	Fuel Plates		253	18.32	0.898	16.44
TNBGC 1 22	TN90	X130 16	N/A	Fuel Plates		278	20.13	0.898	18.07
TNBGC 1 22	TN90	X130 17	N/A	Fuel Plates		289	20.92	0.898	18.78
TNBGC 1 22	TN90	X130 18	N/A	Fuel Plates		290	21.00	0.898	18.85
						Total on this page of Form OR-658E-1	535.35		480.65
						Grand Total on Form OR-658E-1 (all pages)	**535.35**		**480.65**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 21	TN90	X127 1	N/A	Fuel Plates		127	9.24	0.898	8.30
TNBGC 1 21	TN90	X127 2	N/A	Fuel Plates		126	9.17	0.898	8.24
TNBGC 1 21	TN90	X127 3	N/A	Fuel Plates		127	9.24	0.898	8.30
TNBGC 1 21	TN90	X127 4	N/A	Fuel Plates		160	11.64	0.898	10.46
TNBGC 1 21	TN90	X127 5	N/A	Fuel Plates		163	11.86	0.898	10.65
TNBGC 1 21	TN90	X127 6	N/A	Fuel Plates		158	11.49	0.898	10.33
TNBGC 1 21	TN90	X127 7	N/A	Fuel Plates		192	13.97	0.898	12.55
TNBGC 1 21	TN90	X127 8	N/A	Fuel Plates		191	13.90	0.898	12.48
TNBGC 1 21	TN90	X127 9	N/A	Fuel Plates		195	14.19	0.898	12.75
TNBGC 1 21	TN90	X127 10	N/A	Fuel Plates		225	16.37	0.898	14.71
TNBGC 1 21	TN90	X127 11	N/A	Fuel Plates		223	16.22	0.898	14.58
TNBGC 1 21	TN90	X127 12	N/A	Fuel Plates		228	16.44	0.898	14.77
TNBGC 1 21	TN90	X127 13	N/A	Fuel Plates		251	18.26	0.898	16.41
TNBGC 1 21	TN90	X127 14	N/A	Fuel Plates		253	18.41	0.898	16.54
TNBGC 1 21	TN90	X127 15	N/A	Fuel Plates		252	18.33	0.898	16.47
TNBGC 1 21	TN90	X127 16	N/A	Fuel Plates		288	20.81	0.898	18.69
TNBGC 1 21	TN90	X127 17	N/A	Fuel Plates		286	20.81	0.898	18.69
TNBGC 1 21	TN90	X127 18	N/A	Fuel Plates		287	20.88	0.898	18.76
TNBGC 1 21	TN90	X128 1	N/A	Fuel Plates		124	8.99	0.898	8.08
TNBGC 1 21	TN90	X128 2	N/A	Fuel Plates		124	8.99	0.898	8.08
TNBGC 1 21	TN90	X128 3	N/A	Fuel Plates		125	9.07	0.898	8.14
TNBGC 1 21	TN90	X128 4	N/A	Fuel Plates		158	11.46	0.898	10.29
TNBGC 1 21	TN90	X128 5	N/A	Fuel Plates		158	11.46	0.898	10.29
TNBGC 1 21	TN90	X128 6	N/A	Fuel Plates		156	11.31	0.898	10.16
TNBGC 1 21	TN90	X128 7	N/A	Fuel Plates		196	13.84	0.898	12.24
TNBGC 1 21	TN90	X128 8	N/A	Fuel Plates		190	13.78	0.898	12.37
TNBGC 1 21	TN90	X128 9	N/A	Fuel Plates		191	13.85	0.898	12.44
TNBGC 1 21	TN90	X128 10	N/A	Fuel Plates		224	16.25	0.898	14.59
TNBGC 1 21	TN90	X128 11	N/A	Fuel Plates		224	16.25	0.898	14.59
TNBGC 1 21	TN90	X128 12	N/A	Fuel Plates		224	16.25	0.898	14.59
TNBGC 1 21	TN90	X128 13	N/A	Fuel Plates		250	18.13	0.898	16.28
TNBGC 1 21	TN90	X128 14	N/A	Fuel Plates		251	18.21	0.898	16.35
TNBGC 1 21	TN90	X128 15	N/A	Fuel Plates		249	18.06	0.898	16.22
TNBGC 1 21	TN90	X128 16	N/A	Fuel Plates		286	20.74	0.898	18.63
TNBGC 1 21	TN90	X128 17	N/A	Fuel Plates		287	20.82	0.898	18.69
TNBGC 1 21	TN90	X128 18	N/A	Fuel Plates		285	20.67	0.898	18.56
						Total on this page of Form OR-658E-1	539.15		484.25
						Grand Total on Form OR-658E-1 (all pages)	**539.15**		**484.25**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

aration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1									
Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEII/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 20	TN90	X035 1	N/A	Fuel Plates		124	8.92	0.897	8.01
TNBGC 1 20	TN90	X035 2	N/A	Fuel Plates		121	8.71	0.897	7.81
TNBGC 1 20	TN90	X035 3	N/A	Fuel Plates		121	8.71	0.897	7.81
TNBGC 1 20	TN90	X035 4	N/A	Fuel Plates		157	11.30	0.897	10.14
TNBGC 1 20	TN90	X035 5	N/A	Fuel Plates		158	11.37	0.897	10.20
TNBGC 1 20	TN90	X035 6	N/A	Fuel Plates		159	11.44	0.897	10.27
TNBGC 1 20	TN90	X035 7	N/A	Fuel Plates		193	13.89	0.897	12.46
TNBGC 1 20	TN90	X035 8	N/A	Fuel Plates		196	14.10	0.897	12.65
TNBGC 1 20	TN90	X035 9	N/A	Fuel Plates		193	13.89	0.897	12.46
TNBGC 1 20	TN90	X035 10	N/A	Fuel Plates		226	16.26	0.897	14.59
TNBGC 1 20	TN90	X035 11	N/A	Fuel Plates		223	16.04	0.897	14.40
TNBGC 1 20	TN90	X035 12	N/A	Fuel Plates		224	16.12	0.897	14.46
TNBGC 1 20	TN90	X035 13	N/A	Fuel Plates		254	18.28	0.897	16.40
TNBGC 1 20	TN90	X035 14	N/A	Fuel Plates		257	18.49	0.897	16.59
TNBGC 1 20	TN90	X035 15	N/A	Fuel Plates		255	18.35	0.897	16.46
TNBGC 1 20	TN90	X035 16	N/A	Fuel Plates		286	20.58	0.897	18.47
TNBGC 1 20	TN90	X035 17	N/A	Fuel Plates		281	20.22	0.897	18.14
TNBGC 1 20	TN90	X035 18	N/A	Fuel Plates		284	20.43	0.897	18.34
TNBGC 1 20	TN90	X036 1	N/A	Fuel Plates		124	8.90	0.897	7.99
TNBGC 1 20	TN90	X036 2	N/A	Fuel Plates		123	8.83	0.897	7.92
TNBGC 1 20	TN90	X036 3	N/A	Fuel Plates		123	8.83	0.897	7.92
TNBGC 1 20	TN90	X036 4	N/A	Fuel Plates		153	10.98	0.897	9.85
TNBGC 1 20	TN90	X036 5	N/A	Fuel Plates		156	11.20	0.897	10.05
TNBGC 1 20	TN90	X036 6	N/A	Fuel Plates		153	10.98	0.897	9.85
TNBGC 1 20	TN90	X036 7	N/A	Fuel Plates		193	13.85	0.897	12.43
TNBGC 1 20	TN90	X036 8	N/A	Fuel Plates		191	13.71	0.897	12.30
TNBGC 1 20	TN90	X036 9	N/A	Fuel Plates		196	14.07	0.897	12.62
TNBGC 1 20	TN90	X036 10	N/A	Fuel Plates		226	16.22	0.897	14.56
TNBGC 1 20	TN90	X036 11	N/A	Fuel Plates		227	16.30	0.897	14.62
TNBGC 1 20	TN90	X036 12	N/A	Fuel Plates		222	15.94	0.897	14.30
TNBGC 1 20	TN90	X036 13	N/A	Fuel Plates		260	18.66	0.897	16.75
TNBGC 1 20	TN90	X036 14	N/A	Fuel Plates		258	18.52	0.897	16.62
TNBGC 1 20	TN90	X036 15	N/A	Fuel Plates		258	18.52	0.897	16.62
TNBGC 1 20	TN90	X036 16	N/A	Fuel Plates		285	20.45	0.897	18.36
TNBGC 1 20	TN90	X036 17	N/A	Fuel Plates		282	20.24	0.897	18.16
TNBGC 1 20	TN90	X036 18	N/A	Fuel Plates		282	20.24	0.897	18.16
					Total on this page of Form OR-658E-1		533.55		478.75
					Grand Total on Form OR-658E-1 (all pages)		533.55		478.75

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 19	TN90	MXC20 1	N/A	Fuel Plates		177	9.40	0.897	8.44
TNBGC 1 19	TN90	MXC20 2	N/A	Fuel Plates		130	9.62	0.897	8.64
TNBGC 1 19	TN90	MXC20 3	N/A	Fuel Plates		177	9.40	0.897	8.44
TNBGC 1 19	TN90	MXC20 4	N/A	Fuel Plates		157	11.62	0.897	10.43
TNBGC 1 19	TN90	MXC20 5	N/A	Fuel Plates		158	11.70	0.897	10.50
TNBGC 1 19	TN90	MXC20 6	N/A	Fuel Plates		157	11.62	0.897	10.43
TNBGC 1 19	TN90	MXC20 7	N/A	Fuel Plates		187	13.84	0.897	12.42
TNBGC 1 19	TN90	MXC20 8	N/A	Fuel Plates		189	13.99	0.897	12.56
TNBGC 1 19	TN90	MXC20 9	N/A	Fuel Plates		191	14.14	0.897	12.69
TNBGC 1 19	TN90	MXC20 10	N/A	Fuel Plates		226	16.73	0.897	15.02
TNBGC 1 19	TN90	MXC20 11	N/A	Fuel Plates		213	15.77	0.897	14.15
TNBGC 1 19	TN90	MXC20 12	N/A	Fuel Plates		222	16.44	0.897	14.75
TNBGC 1 19	TN90	MXC20 13	N/A	Fuel Plates		250	18.51	0.897	16.61
TNBGC 1 19	TN90	MXC20 14	N/A	Fuel Plates		257	19.03	0.897	17.08
TNBGC 1 19	TN90	MXC20 15	N/A	Fuel Plates		252	18.66	0.897	16.74
TNBGC 1 19	TN90	MXC20 16	N/A	Fuel Plates		280	20.73	0.897	18.60
TNBGC 1 19	TN90	MXC20 17	N/A	Fuel Plates		283	20.95	0.897	18.80
TNBGC 1 19	TN90	MXC20 18	N/A	Fuel Plates		276	20.43	0.897	18.34
TNBGC 1 19	TN90	X033 1	N/A	Fuel Plates		123	8.82	0.897	7.91
TNBGC 1 19	TN90	X033 2	N/A	Fuel Plates		126	9.03	0.897	8.11
TNBGC 1 19	TN90	X033 3	N/A	Fuel Plates		154	11.04	0.897	9.91
TNBGC 1 19	TN90	X033 4	N/A	Fuel Plates		156	11.18	0.897	10.04
TNBGC 1 19	TN90	X033 5	N/A	Fuel Plates		152	10.90	0.897	9.78
TNBGC 1 19	TN90	X033 6	N/A	Fuel Plates		193	13.84	0.897	12.42
TNBGC 1 19	TN90	X033 7	N/A	Fuel Plates		193	13.84	0.897	12.42
TNBGC 1 19	TN90	X033 8	N/A	Fuel Plates		194	13.91	0.897	12.48
TNBGC 1 19	TN90	X033 9	N/A	Fuel Plates		224	16.06	0.897	14.41
TNBGC 1 19	TN90	X033 10	N/A	Fuel Plates		226	16.20	0.897	14.54
TNBGC 1 19	TN90	X033 11	N/A	Fuel Plates		224	16.06	0.897	14.41
TNBGC 1 19	TN90	X033 12	N/A	Fuel Plates		260	18.64	0.897	16.73
TNBGC 1 19	TN90	X033 13	N/A	Fuel Plates		256	18.35	0.897	16.47
TNBGC 1 19	TN90	X033 14	N/A	Fuel Plates		254	18.21	0.897	16.34
TNBGC 1 19	TN90	X033 15	N/A	Fuel Plates		286	20.50	0.897	18.40
TNBGC 1 19	TN90	X033 16	N/A	Fuel Plates		289	20.72	0.897	18.59
TNBGC 1 19	TN90	X033 17	N/A	Fuel Plates		284	20.36	0.897	18.27
					Total on this page of Form OR-668E-1		530.242		475.875
					Grand Total on Form OR-668E-1 (all pages)		530.242		475.875

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

ıration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 18	TN90	MXC18 1	N/A	Fuel Plates		121	8.91	0.901	8.03
TNBGC 1 18	TN90	MXC18 2	N/A	Fuel Plates		123	9.06	0.901	8.16
TNBGC 1 18	TN90	MXC18 3	N/A	Fuel Plates		123	9.06	0.901	8.16
TNBGC 1 18	TN90	MXC18 4	N/A	Fuel Plates		160	11.78	0.901	10.61
TNBGC 1 18	TN90	MXC18 5	N/A	Fuel Plates		151	11.86	0.901	10.68
TNBGC 1 18	TN90	MXC18 6	N/A	Fuel Plates		159	11.71	0.901	10.55
TNBGC 1 18	TN90	MXC18 7	N/A	Fuel Plates		192	14.14	0.901	12.74
TNBGC 1 18	TN90	MXC18 8	N/A	Fuel Plates		187	13.77	0.901	12.41
TNBGC 1 18	TN90	MXC18 9	N/A	Fuel Plates		190	13.99	0.901	12.61
TNBGC 1 18	TN90	MXC18 10	N/A	Fuel Plates		227	16.72	0.901	15.06
TNBGC 1 18	TN90	MXC18 11	N/A	Fuel Plates		229	16.79	0.901	15.13
TNBGC 1 18	TN90	MXC18 12	N/A	Fuel Plates		227	16.72	0.901	15.06
TNBGC 1 18	TN90	MXC18 13	N/A	Fuel Plates		252	18.56	0.901	16.72
TNBGC 1 18	TN90	MXC18 14	N/A	Fuel Plates		253	18.63	0.901	16.78
TNBGC 1 18	TN90	MXC18 15	N/A	Fuel Plates		251	18.49	0.901	16.65
TNBGC 1 18	TN90	MXC18 16	N/A	Fuel Plates		282	20.77	0.901	18.71
TNBGC 1 18	TN90	MXC18 17	N/A	Fuel Plates		283	20.84	0.901	18.78
TNBGC 1 18	TN90	MXC18 18	N/A	Fuel Plates		282	20.77	0.901	18.71
TNBGC 1 18	TN90	MXC19 1	N/A	Fuel Plates		123	8.89	0.898	8.07
TNBGC 1 18	TN90	MXC19 2	N/A	Fuel Plates		126	9.21	0.898	8.27
TNBGC 1 18	TN90	MXC19 3	N/A	Fuel Plates		124	9.06	0.898	8.14
TNBGC 1 18	TN90	MXC19 4	N/A	Fuel Plates		156	11.40	0.898	10.24
TNBGC 1 18	TN90	MXC19 5	N/A	Fuel Plates		156	11.40	0.898	10.24
TNBGC 1 18	TN90	MXC19 6	N/A	Fuel Plates		157	11.48	0.898	10.30
TNBGC 1 18	TN90	MXC19 7	N/A	Fuel Plates		191	13.96	0.898	12.54
TNBGC 1 18	TN90	MXC19 8	N/A	Fuel Plates		194	14.18	0.898	12.73
TNBGC 1 18	TN90	MXC19 9	N/A	Fuel Plates		189	13.82	0.898	12.40
TNBGC 1 18	TN90	MXC19 10	N/A	Fuel Plates		228	16.67	0.898	14.96
TNBGC 1 18	TN90	MXC19 11	N/A	Fuel Plates		226	16.52	0.898	14.83
TNBGC 1 18	TN90	MXC19 12	N/A	Fuel Plates		226	16.52	0.898	14.83
TNBGC 1 18	TN90	MXC19 13	N/A	Fuel Plates		252	18.42	0.898	16.54
TNBGC 1 18	TN90	MXC19 14	N/A	Fuel Plates		254	18.57	0.898	16.67
TNBGC 1 18	TN90	MXC19 15	N/A	Fuel Plates		257	18.79	0.898	16.87
TNBGC 1 18	TN90	MXC19 16	N/A	Fuel Plates		285	20.83	0.898	18.71
TNBGC 1 18	TN90	MXC19 17	N/A	Fuel Plates		292	21.35	0.898	19.16
TNBGC 1 18	TN90	MXC19 18	N/A	Fuel Plates		293	21.42	0.898	19.23
					Total on this page of Form OR-668E-1		545.184		490.28
					Grand Total on Form OR-658E-1 (all pages)		**545.184**		**490.28**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 17	TN90	MXC14 1	N/A	Fuel Plates		119	8.03	0.897	8.01
TNBGC 1 17	TN90	MXC14 2	N/A	Fuel Plates		120	9.01	0.897	8.08
TNBGC 1 17	TN90	MXC14 3	N/A	Fuel Plates		119	8.93	0.897	8.01
TNBGC 1 17	TN90	MXC14 4	N/A	Fuel Plates		153	11.48	0.897	10.30
TNBGC 1 17	TN90	MXC14 5	N/A	Fuel Plates		152	11.41	0.897	10.23
TNBGC 1 17	TN90	MXC14 6	N/A	Fuel Plates		154	11.56	0.897	10.36
TNBGC 1 17	TN90	MXC14 7	N/A	Fuel Plates		185	13.88	0.897	12.45
TNBGC 1 17	TN90	MXC14 8	N/A	Fuel Plates		191	14.34	0.897	12.85
TNBGC 1 17	TN90	MXC14 9	N/A	Fuel Plates		187	14.03	0.897	12.58
TNBGC 1 17	TN90	MXC14 10	N/A	Fuel Plates		222	16.66	0.897	14.94
TNBGC 1 17	TN90	MXC14 11	N/A	Fuel Plates		220	16.51	0.897	14.81
TNBGC 1 17	TN90	MXC14 12	N/A	Fuel Plates		222	16.66	0.897	14.94
TNBGC 1 17	TN90	MXC14 13	N/A	Fuel Plates		252	18.91	0.897	16.96
TNBGC 1 17	TN90	MXC14 14	N/A	Fuel Plates		251	18.84	0.897	16.89
TNBGC 1 17	TN90	MXC14 15	N/A	Fuel Plates		251	18.84	0.897	16.89
TNBGC 1 17	TN90	MXC14 16	N/A	Fuel Plates		276	20.71	0.897	18.57
TNBGC 1 17	TN90	MXC14 17	N/A	Fuel Plates		278	20.86	0.897	18.71
TNBGC 1 17	TN90	MXC14 18	N/A	Fuel Plates		280	21.01	0.897	18.84
TNBGC 1 17	TN90	MXC16 1	N/A	Fuel Plates		123	9.10	0.893	8.12
TNBGC 1 17	TN90	MXC16 2	N/A	Fuel Plates		124	9.17	0.893	8.19
TNBGC 1 17	TN90	MXC16 3	N/A	Fuel Plates		123	9.10	0.893	8.12
BGC 1 17	TN90	MXC16 4	N/A	Fuel Plates		158	11.68	0.893	10.43
GC 1 17	TN90	MXC16 5	N/A	Fuel Plates		155	11.46	0.893	10.24
TNBGC 1 17	TN90	MXC16 6	N/A	Fuel Plates		158	11.68	0.893	10.43
TNBGC 1 17	TN90	MXC16 7	N/A	Fuel Plates		191	14.13	0.893	12.61
TNBGC 1 17	TN90	MXC16 8	N/A	Fuel Plates		192	14.20	0.893	12.68
TNBGC 1 17	TN90	MXC16 9	N/A	Fuel Plates		191	14.13	0.893	12.61
TNBGC 1 17	TN90	MXC16 10	N/A	Fuel Plates		214	15.83	0.893	14.13
TNBGC 1 17	TN90	MXC16 11	N/A	Fuel Plates		216	15.97	0.893	14.26
TNBGC 1 17	TN90	MXC16 12	N/A	Fuel Plates		215	15.90	0.893	14.20
TNBGC 1 17	TN90	MXC16 13	N/A	Fuel Plates		257	19.01	0.893	16.97
TNBGC 1 17	TN90	MXC16 14	N/A	Fuel Plates		260	19.23	0.893	17.17
TNBGC 1 17	TN90	MXC16 15	N/A	Fuel Plates		257	19.01	0.893	16.97
TNBGC 1 17	TN90	MXC16 16	N/A	Fuel Plates		279	20.63	0.893	18.42
TNBGC 1 17	TN90	MXC16 17	N/A	Fuel Plates		292	21.59	0.893	19.28
TNBGC 1 17	TN90	MXC16 18	N/A	Fuel Plates		281	20.78	0.893	18.56
					Total on this page of Form OR-658E-1		545.184		487.829
					Grand Total on Form OR-658E-1 (all pages)		**545.184**		**487.829**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

ration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 16	TN90	MXC12 1	N/A	Fuel Plates		121	9.07	0.902	8.18
TNBGC 1 16	TN90	MXC12 2	N/A	Fuel Plates		120	8.99	0.902	8.11
TNBGC 1 16	TN90	MXC12 3	N/A	Fuel Plates		120	8.99	0.902	8.11
TNBGC 1 16	TN90	MXC12 4	N/A	Fuel Plates		156	11.69	0.902	10.54
TNBGC 1 16	TN90	MXC12 5	N/A	Fuel Plates		156	11.69	0.902	10.54
TNBGC 1 16	TN90	MXC12 6	N/A	Fuel Plates		156	11.69	0.902	10.54
TNBGC 1 16	TN90	MXC12 7	N/A	Fuel Plates		193	14.47	0.902	13.04
TNBGC 1 16	TN90	MXC12 8	N/A	Fuel Plates		188	14.09	0.902	12.70
TNBGC 1 16	TN90	MXC12 9	N/A	Fuel Plates		191	14.32	0.902	12.91
TNBGC 1 16	TN90	MXC12 10	N/A	Fuel Plates		225	16.86	0.902	15.20
TNBGC 1 16	TN90	MXC12 11	N/A	Fuel Plates		222	16.64	0.902	15.00
TNBGC 1 16	TN90	MXC12 12	N/A	Fuel Plates		224	16.79	0.902	15.14
TNBGC 1 16	TN90	MXC12 13	N/A	Fuel Plates		250	18.74	0.902	16.89
TNBGC 1 16	TN90	MXC12 14	N/A	Fuel Plates		243	18.21	0.902	16.42
TNBGC 1 16	TN90	MXC12 15	N/A	Fuel Plates		252	18.89	0.902	17.03
TNBGC 1 16	TN90	MXC12 16	N/A	Fuel Plates		269	20.16	0.902	18.18
TNBGC 1 16	TN90	MXC12 17	N/A	Fuel Plates		278	20.69	0.902	18.65
TNBGC 1 16	TN90	MXC12 18	N/A	Fuel Plates		275	20.61	0.902	18.58
TNBGC 1 16	TN90	MXC13 1	N/A	Fuel Plates		120	8.80	0.894	7.86
TNBGC 1 16	TN90	MXC13 2	N/A	Fuel Plates		121	8.87	0.894	7.93
TNBGC 1 16	TN90	MXC13 3	N/A	Fuel Plates		120	8.80	0.894	7.86
TNBGC 1 16	TN90	MXC13 4	N/A	Fuel Plates		157	11.51	0.894	10.29
TNBGC 1 16	TN90	MXC13 5	N/A	Fuel Plates		157	11.51	0.894	10.29
TNBGC 1 16	TN90	MXC13 6	N/A	Fuel Plates		157	11.51	0.894	10.29
TNBGC 1 16	TN90	MXC13 7	N/A	Fuel Plates		190	13.93	0.894	12.45
TNBGC 1 16	TN90	MXC13 8	N/A	Fuel Plates		194	14.22	0.894	12.71
TNBGC 1 16	TN90	MXC13 9	N/A	Fuel Plates		192	14.07	0.894	12.58
TNBGC 1 16	TN90	MXC13 10	N/A	Fuel Plates		222	16.27	0.894	14.54
TNBGC 1 16	TN90	MXC13 11	N/A	Fuel Plates		219	16.05	0.894	14.35
TNBGC 1 16	TN90	MXC13 12	N/A	Fuel Plates		226	16.57	0.894	14.81
TNBGC 1 16	TN90	MXC13 13	N/A	Fuel Plates		252	18.47	0.894	16.51
TNBGC 1 16	TN90	MXC13 14	N/A	Fuel Plates		254	18.62	0.894	16.64
TNBGC 1 16	TN90	MXC13 15	N/A	Fuel Plates		258	18.91	0.894	16.90
TNBGC 1 16	TN90	MXC13 16	N/A	Fuel Plates		289	21.18	0.894	18.93
TNBGC 1 16	TN90	MXC13 17	N/A	Fuel Plates		296	21.70	0.894	19.39
TNBGC 1 16	TN90	MXC13 18	N/A	Fuel Plates		295	21.62	0.894	19.33
						Total on this page of Form OR-658E-1	545.184		489.412
						Grand Total on Form OR-658E-1 (all pages)	**545.184**		**489.412**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

Declaration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 15	TN90	MXC10 1	N/A	Fuel Plates		124	9.12	0.899	8.19
TNBGC 1 15	TN90	MXC10 2	N/A	Fuel Plates		124	9.12	0.899	8.19
TNBGC 1 15	TN90	MXC10 3	N/A	Fuel Plates		120	8.82	0.899	7.93
TNBGC 1 15	TN90	MXC10 4	N/A	Fuel Plates		156	11.47	0.899	10.31
TNBGC 1 15	TN90	MXC10 5	N/A	Fuel Plates		156	11.47	0.899	10.31
TNBGC 1 15	TN90	MXC10 6	N/A	Fuel Plates		157	11.54	0.899	10.37
TNBGC 1 15	TN90	MXC10 7	N/A	Fuel Plates		193	14.19	0.899	12.75
TNBGC 1 15	TN90	MXC10 8	N/A	Fuel Plates		188	13.82	0.899	12.42
TNBGC 1 15	TN90	MXC10 9	N/A	Fuel Plates		185	13.60	0.899	12.22
TNBGC 1 15	TN90	MXC10 10	N/A	Fuel Plates		223	16.39	0.899	14.74
TNBGC 1 15	TN90	MXC10 11	N/A	Fuel Plates		220	16.17	0.899	14.54
TNBGC 1 15	TN90	MXC10 12	N/A	Fuel Plates		216	15.88	0.899	14.27
TNBGC 1 15	TN90	MXC10 13	N/A	Fuel Plates		254	18.67	0.899	16.78
TNBGC 1 15	TN90	MXC10 14	N/A	Fuel Plates		251	18.45	0.899	16.59
TNBGC 1 15	TN90	MXC10 15	N/A	Fuel Plates		252	18.53	0.899	16.65
TNBGC 1 15	TN90	MXC10 16	N/A	Fuel Plates		299	21.98	0.899	19.76
TNBGC 1 15	TN90	MXC10 17	N/A	Fuel Plates		296	21.76	0.899	19.56
TNBGC 1 15	TN90	MXC10 18	N/A	Fuel Plates		294	21.61	0.899	19.43
TNBGC 1 15	TN90	MXC11 1	N/A	Fuel Plates		117	8.91	0.899	8.02
TNBGC 1 15	TN90	MXC11 2	N/A	Fuel Plates		120	9.14	0.899	8.22
TNBGC 1 15	TN90	MXC11 3	N/A	Fuel Plates		116	8.84	0.899	7.95
BGC 1 15	TN90	MXC11 4	N/A	Fuel Plates		151	11.50	0.899	10.34
BGC 1 15	TN90	MXC11 5	N/A	Fuel Plates		154	11.73	0.899	10.55
TNBGC 1 15	TN90	MXC11 6	N/A	Fuel Plates		153	11.65	0.899	10.48
TNBGC 1 15	TN90	MXC11 7	N/A	Fuel Plates		182	13.87	0.899	12.47
TNBGC 1 15	TN90	MXC11 8	N/A	Fuel Plates		183	13.94	0.899	12.54
TNBGC 1 15	TN90	MXC11 9	N/A	Fuel Plates		182	13.87	0.899	12.47
TNBGC 1 15	TN90	MXC11 10	N/A	Fuel Plates		217	16.53	0.899	14.87
TNBGC 1 15	TN90	MXC11 11	N/A	Fuel Plates		212	16.15	0.899	14.52
TNBGC 1 15	TN90	MXC11 12	N/A	Fuel Plates		214	16.30	0.899	14.66
TNBGC 1 15	TN90	MXC11 13	N/A	Fuel Plates		240	18.28	0.899	16.44
TNBGC 1 15	TN90	MXC11 14	N/A	Fuel Plates		244	18.59	0.899	16.72
TNBGC 1 15	TN90	MXC11 15	N/A	Fuel Plates		241	18.36	0.899	16.51
TNBGC 1 15	TN90	MXC11 16	N/A	Fuel Plates		282	21.48	0.899	19.32
TNBGC 1 15	TN90	MXC11 17	N/A	Fuel Plates		284	21.64	0.899	19.46
TNBGC 1 15	TN90	MXC11 18	N/A	Fuel Plates		286	21.79	0.899	19.59
					Total on this page of Form OR-658E-1		545.184		490.139
					Grand Total on Form OR-658E-1 (all pages)		**545.184**		**490.139**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

aration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 14	TN90	MXC8 1	N/A	Fuel Plates		122	9.14	0.900	8.22
TNBGC 1 14	TN90	MXC8 2	N/A	Fuel Plates		116	8.84	0.900	7.96
TNBGC 1 14	TN90	MXC8 3	N/A	Fuel Plates		117	8.77	0.900	7.89
TNBGC 1 14	TN90	MXC8 4	N/A	Fuel Plates		153	11.47	0.900	10.31
TNBGC 1 14	TN90	MXC8 5	N/A	Fuel Plates		158	11.84	0.900	10.65
TNBGC 1 14	TN90	MXC8 6	N/A	Fuel Plates		158	11.84	0.900	10.65
TNBGC 1 14	TN90	MXC8 7	N/A	Fuel Plates		177	13.27	0.900	11.93
TNBGC 1 14	TN90	MXC8 8	N/A	Fuel Plates		178	13.34	0.900	12.00
TNBGC 1 14	TN90	MXC8 9	N/A	Fuel Plates		177	13.27	0.900	11.93
TNBGC 1 14	TN90	MXC8 10	N/A	Fuel Plates		222	16.64	0.900	14.97
TNBGC 1 14	TN90	MXC8 11	N/A	Fuel Plates		221	16.56	0.900	14.90
TNBGC 1 14	TN90	MXC8 12	N/A	Fuel Plates		225	16.86	0.900	15.17
TNBGC 1 14	TN90	MXC8 13	N/A	Fuel Plates		254	19.04	0.900	17.12
TNBGC 1 14	TN90	MXC8 14	N/A	Fuel Plates		254	19.04	0.900	17.12
TNBGC 1 14	TN90	MXC8 15	N/A	Fuel Plates		248	18.59	0.900	16.72
TNBGC 1 14	TN90	MXC8 16	N/A	Fuel Plates		288	21.59	0.900	19.42
TNBGC 1 14	TN90	MXC8 17	N/A	Fuel Plates		278	20.84	0.900	18.74
TNBGC 1 14	TN90	MXC8 18	N/A	Fuel Plates		289	21.66	0.900	19.48
TNBGC 1 14	TN90	MXC9 1	N/A	Fuel Plates		118	8.84	0.899	7.94
TNBGC 1 14	TN90	MXC9 2	N/A	Fuel Plates		118	8.84	0.899	7.94
TNBGC 1 14	TN90	MXC9 3	N/A	Fuel Plates		120	8.99	0.899	8.08
TNBGC 1 14	TN90	MXC9 4	N/A	Fuel Plates		154	11.54	0.899	10.37
TNBGC 1 14	TN90	MXC9 5	N/A	Fuel Plates		152	11.39	0.899	10.23
TNBGC 1 14	TN90	MXC9 6	N/A	Fuel Plates		151	11.31	0.899	10.16
TNBGC 1 14	TN90	MXC9 7	N/A	Fuel Plates		185	13.86	0.899	12.45
TNBGC 1 14	TN90	MXC9 8	N/A	Fuel Plates		189	14.16	0.899	12.72
TNBGC 1 14	TN90	MXC9 9	N/A	Fuel Plates		187	14.01	0.899	12.59
TNBGC 1 14	TN90	MXC9 10	N/A	Fuel Plates		218	16.33	0.899	14.67
TNBGC 1 14	TN90	MXC9 11	N/A	Fuel Plates		215	16.11	0.899	14.47
TNBGC 1 14	TN90	MXC9 12	N/A	Fuel Plates		215	16.11	0.899	14.47
TNBGC 1 14	TN90	MXC9 13	N/A	Fuel Plates		254	19.03	0.899	17.10
TNBGC 1 14	TN90	MXC9 14	N/A	Fuel Plates		252	18.88	0.899	16.96
TNBGC 1 14	TN90	MXC9 15	N/A	Fuel Plates		254	19.03	0.899	17.10
TNBGC 1 14	TN90	MXC9 16	N/A	Fuel Plates		287	21.50	0.899	19.32
TNBGC 1 14	TN90	MXC9 17	N/A	Fuel Plates		282	21.12	0.899	18.98
TNBGC 1 14	TN90	MXC9 18	N/A	Fuel Plates		288	21.57	0.899	19.38
					Total on this page of Form OR-658E-1		545.184		490.122
					Grand Total on Form OR-658E-1 (all pages)		545.184		490.122

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 13	TN90	MXC6 1	N/A	Fuel Plates		122	9.16	0.898	8.22
TNBGC 1 13	TN90	MXC6 2	N/A	Fuel Plates		120	9.01	0.898	8.09
TNBGC 1 13	TN90	MXC6 3	N/A	Fuel Plates		120	9.01	0.898	8.09
TNBGC 1 13	TN90	MXC6 4	N/A	Fuel Plates		152	11.41	0.898	10.24
TNBGC 1 13	TN90	MXC6 5	N/A	Fuel Plates		154	11.56	0.898	10.38
TNBGC 1 13	TN90	MXC6 6	N/A	Fuel Plates		154	11.56	0.898	10.38
TNBGC 1 13	TN90	MXC6 7	N/A	Fuel Plates		193	14.49	0.898	13.00
TNBGC 1 13	TN90	MXC6 8	N/A	Fuel Plates		189	14.18	0.898	12.74
TNBGC 1 13	TN90	MXC6 9	N/A	Fuel Plates		189	14.18	0.898	12.74
TNBGC 1 13	TN90	MXC6 10	N/A	Fuel Plates		219	16.44	0.898	14.76
TNBGC 1 13	TN90	MXC6 11	N/A	Fuel Plates		213	15.99	0.898	14.35
TNBGC 1 13	TN90	MXC6 12	N/A	Fuel Plates		218	16.36	0.898	14.69
TNBGC 1 13	TN90	MXC6 13	N/A	Fuel Plates		253	18.99	0.898	17.05
TNBGC 1 13	TN90	MXC6 14	N/A	Fuel Plates		243	18.24	0.898	16.37
TNBGC 1 13	TN90	MXC6 15	N/A	Fuel Plates		253	18.99	0.898	17.05
TNBGC 1 13	TN90	MXC6 16	N/A	Fuel Plates		274	20.56	0.898	18.46
TNBGC 1 13	TN90	MXC6 17	N/A	Fuel Plates		277	20.79	0.898	18.66
TNBGC 1 13	TN90	MXC6 18	N/A	Fuel Plates		289	21.69	0.898	19.47
TNBGC 1 13	TN90	MXC7 1	N/A	Fuel Plates		124	9.21	0.897	8.26
TNBGC 1 13	TN90	MXC7 2	N/A	Fuel Plates		122	9.08	0.897	8.13
TNBGC 1 13	TN90	MXC7 3	N/A	Fuel Plates		123	9.13	0.897	8.19
TNBGC 1 13	TN90	MXC7 4	N/A	Fuel Plates		152	11.29	0.897	10.13
TNBGC 1 13	TN90	MXC7 5	N/A	Fuel Plates		155	11.51	0.897	10.33
TNBGC 1 13	TN90	MXC7 6	N/A	Fuel Plates		159	11.81	0.897	10.59
TNBGC 1 13	TN90	MXC7 7	N/A	Fuel Plates		186	13.81	0.897	12.39
TNBGC 1 13	TN90	MXC7 8	N/A	Fuel Plates		187	13.89	0.897	12.46
TNBGC 1 13	TN90	MXC7 9	N/A	Fuel Plates		188	13.96	0.897	12.52
TNBGC 1 13	TN90	MXC7 10	N/A	Fuel Plates		228	16.93	0.897	15.19
TNBGC 1 13	TN90	MXC7 11	N/A	Fuel Plates		218	16.19	0.897	14.52
TNBGC 1 13	TN90	MXC7 12	N/A	Fuel Plates		220	16.34	0.897	14.66
TNBGC 1 13	TN90	MXC7 13	N/A	Fuel Plates		252	18.71	0.897	16.79
TNBGC 1 13	TN90	MXC7 14	N/A	Fuel Plates		254	18.86	0.897	16.92
TNBGC 1 13	TN90	MXC7 15	N/A	Fuel Plates		253	18.79	0.897	16.85
TNBGC 1 13	TN90	MXC7 16	N/A	Fuel Plates		286	21.24	0.897	19.05
TNBGC 1 13	TN90	MXC7 17	N/A	Fuel Plates		287	21.31	0.897	19.12
TNBGC 1 13	TN90	MXC7 18	N/A	Fuel Plates		277	20.57	0.897	18.45
				Total on this page of Form OR-658E-1			545.184		489.275
				Grand Total on Form OR-658E-1 (all pages)			**545.184**		**489.275**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **ıration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-668C-1)	Inner (Primary) Container Serial/ID Number (Form OR-668D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEU ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 12	TN90	MXC4 1	N/A	Fuel Plates		118	8.86	0.901	8.01
TNBGC 1 12	TN90	MXC4 2	N/A	Fuel Plates		118	8.86	0.901	8.01
TNBGC 1 12	TN90	MXC4 3	N/A	Fuel Plates		119	8.97	0.901	8.08
TNBGC 1 12	TN90	MXC4 4	N/A	Fuel Plates		151	11.38	0.901	10.25
TNBGC 1 12	TN90	MXC4 5	N/A	Fuel Plates		150	11.30	0.901	10.18
TNBGC 1 12	TN90	MXC4 6	N/A	Fuel Plates		150	11.30	0.901	10.18
TNBGC 1 12	TN90	MXC4 7	N/A	Fuel Plates		181	13.64	0.901	12.29
TNBGC 1 12	TN90	MXC4 8	N/A	Fuel Plates		192	14.47	0.901	13.03
TNBGC 1 12	TN90	MXC4 9	N/A	Fuel Plates		189	14.24	0.901	12.83
TNBGC 1 12	TN90	MXC4 10	N/A	Fuel Plates		215	16.20	0.901	14.59
TNBGC 1 12	TN90	MXC4 11	N/A	Fuel Plates		214	16.12	0.901	14.53
TNBGC 1 12	TN90	MXC4 12	N/A	Fuel Plates		217	16.35	0.901	14.73
TNBGC 1 12	TN90	MXC4 13	N/A	Fuel Plates		253	19.06	0.901	17.17
TNBGC 1 12	TN90	MXC4 14	N/A	Fuel Plates		256	19.29	0.901	17.38
TNBGC 1 12	TN90	MXC4 15	N/A	Fuel Plates		252	18.99	0.901	17.10
TNBGC 1 12	TN90	MXC4 16	N/A	Fuel Plates		280	21.10	0.901	19.01
TNBGC 1 12	TN90	MXC4 17	N/A	Fuel Plates		281	21.17	0.901	19.07
TNBGC 1 12	TN90	MXC4 18	N/A	Fuel Plates		282	21.25	0.901	19.14
TNBGC 1 12	TN90	MXC5 1	N/A	Fuel Plates		126	9.22	0.899	8.30
TNBGC 1 12	TN90	MXC5 2	N/A	Fuel Plates		124	9.08	0.899	8.16
TNBGC 1 12	TN90	MXC5 3	N/A	Fuel Plates		124	9.08	0.899	8.16
TNBGC 1 12	TN90	MXC5 4	N/A	Fuel Plates		156	11.42	0.899	10.27
TNBGC 1 12	TN90	MXC5 5	N/A	Fuel Plates		153	11.20	0.899	10.07
TNBGC 1 12	TN90	MXC5 6	N/A	Fuel Plates		153	11.20	0.899	10.07
TNBGC 1 12	TN90	MXC5 7	N/A	Fuel Plates		194	14.20	0.899	12.77
TNBGC 1 12	TN90	MXC5 8	N/A	Fuel Plates		194	14.20	0.899	12.77
TNBGC 1 12	TN90	MXC5 9	N/A	Fuel Plates		195	14.27	0.899	12.84
TNBGC 1 12	TN90	MXC5 10	N/A	Fuel Plates		230	16.84	0.899	15.14
TNBGC 1 12	TN90	MXC5 11	N/A	Fuel Plates		223	16.32	0.899	14.68
TNBGC 1 12	TN90	MXC5 12	N/A	Fuel Plates		223	16.32	0.899	14.68
TNBGC 1 12	TN90	MXC5 13	N/A	Fuel Plates		258	18.89	0.899	16.99
TNBGC 1 12	TN90	MXC5 14	N/A	Fuel Plates		259	18.96	0.899	17.05
TNBGC 1 12	TN90	MXC5 15	N/A	Fuel Plates		262	19.18	0.899	17.25
TNBGC 1 12	TN90	MXC5 16	N/A	Fuel Plates		279	20.42	0.899	18.37
TNBGC 1 12	TN90	MXC5 17	N/A	Fuel Plates		285	20.86	0.899	18.76
TNBGC 1 12	TN90	MXC5 18	N/A	Fuel Plates		286	20.93	0.899	18.83
						Total on this page of Form OR-668E-1	545.184		490.747
						Grand Total on Form OR-668E-1 (all pages)	**545.184**		**490.747**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 11	TN90	MXC2 1	N/A	Fuel Plates		121	8.90	0.893	7.95
TNBGC 1 11	TN90	MXC2 2	N/A	Fuel Plates		120	8.82	0.893	7.88
TNBGC 1 11	TN90	MXC2 3	N/A	Fuel Plates		120	8.82	0.893	7.88
TNBGC 1 11	TN90	MXC2 4	N/A	Fuel Plates		153	11.25	0.893	10.05
TNBGC 1 11	TN90	MXC2 5	N/A	Fuel Plates		155	11.39	0.893	10.18
TNBGC 1 11	TN90	MXC2 6	N/A	Fuel Plates		152	11.17	0.893	9.98
TNBGC 1 11	TN90	MXC2 7	N/A	Fuel Plates		192	14.11	0.893	12.61
TNBGC 1 11	TN90	MXC2 8	N/A	Fuel Plates		194	14.26	0.893	12.74
TNBGC 1 11	TN90	MXC2 9	N/A	Fuel Plates		192	14.11	0.893	12.61
TNBGC 1 11	TN90	MXC2 10	N/A	Fuel Plates		227	16.69	0.893	14.91
TNBGC 1 11	TN90	MXC2 11	N/A	Fuel Plates		227	16.69	0.893	14.91
TNBGC 1 11	TN90	MXC2 12	N/A	Fuel Plates		221	16.25	0.893	14.51
TNBGC 1 11	TN90	MXC2 13	N/A	Fuel Plates		251	18.45	0.893	16.48
TNBGC 1 11	TN90	MXC2 14	N/A	Fuel Plates		264	19.41	0.893	17.34
TNBGC 1 11	TN90	MXC2 15	N/A	Fuel Plates		259	19.04	0.893	17.01
TNBGC 1 11	TN90	MXC2 16	N/A	Fuel Plates		286	21.03	0.893	18.78
TNBGC 1 11	TN90	MXC2 17	N/A	Fuel Plates		289	21.25	0.893	18.98
TNBGC 1 11	TN90	MXC2 18	N/A	Fuel Plates		285	20.95	0.893	18.71
TNBGC 1 11	TN90	MXC3 1	N/A	Fuel Plates		123	9.10	0.902	8.21
TNBGC 1 11	TN90	MXC3 2	N/A	Fuel Plates		124	9.18	0.902	8.28
TNBGC 1 11	TN90	MXC3 3	N/A	Fuel Plates		125	9.25	0.902	8.34
GC 1 11	TN90	MXC3 4	N/A	Fuel Plates		152	11.25	0.902	10.15
GC 1 11	TN90	MXC3 5	N/A	Fuel Plates		151	11.18	0.902	10.08
TNBGC 1 11	TN90	MXC3 6	N/A	Fuel Plates		156	11.55	0.902	10.41
TNBGC 1 11	TN90	MXC3 7	N/A	Fuel Plates		190	14.06	0.902	12.68
TNBGC 1 11	TN90	MXC3 8	N/A	Fuel Plates		194	14.36	0.902	12.95
TNBGC 1 11	TN90	MXC3 9	N/A	Fuel Plates		192	14.21	0.902	12.82
TNBGC 1 11	TN90	MXC3 10	N/A	Fuel Plates		223	16.51	0.902	14.89
TNBGC 1 11	TN90	MXC3 11	N/A	Fuel Plates		222	16.43	0.902	14.82
TNBGC 1 11	TN90	MXC3 12	N/A	Fuel Plates		223	16.51	0.902	14.89
TNBGC 1 11	TN90	MXC3 13	N/A	Fuel Plates		262	19.39	0.902	17.49
TNBGC 1 11	TN90	MXC3 14	N/A	Fuel Plates		260	19.24	0.902	17.36
TNBGC 1 11	TN90	MXC3 15	N/A	Fuel Plates		248	18.43	0.902	16.62
TNBGC 1 11	TN90	MXC3 16	N/A	Fuel Plates		276	20.43	0.902	18.42
TNBGC 1 11	TN90	MXC3 17	N/A	Fuel Plates		278	20.58	0.902	18.56
TNBGC 1 11	TN90	MXC3 18	N/A	Fuel Plates		283	20.95	0.902	18.89
						Total on this page of Form OR-668E-1	545.184		489.33
						Grand Total on Form OR-668E-1 (all pages)	545.184		489.33

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1 ation Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 10	TN90	X132 1	N/A	Fuel Plates		125	9.01	0.899	8.10
TNBGC 1 10	TN90	X132 2	N/A	Fuel Plates		126	9.08	0.899	8.16
TNBGC 1 10	TN90	X132 3	N/A	Fuel Plates		126	9.08	0.899	8.16
TNBGC 1 10	TN90	X132 4	N/A	Fuel Plates		159	11.46	0.899	10.30
TNBGC 1 10	TN90	X132 5	N/A	Fuel Plates		159	11.46	0.899	10.30
TNBGC 1 10	TN90	X132 6	N/A	Fuel Plates		161	11.60	0.899	10.43
TNBGC 1 10	TN90	X132 7	N/A	Fuel Plates		194	13.98	0.899	12.57
TNBGC 1 10	TN90	X132 8	N/A	Fuel Plates		182	13.64	0.899	12.44
TNBGC 1 10	TN90	X132 9	N/A	Fuel Plates		193	13.91	0.899	12.50
TNBGC 1 10	TN90	X132 10	N/A	Fuel Plates		223	16.07	0.899	14.45
TNBGC 1 10	TN90	X132 11	N/A	Fuel Plates		221	15.93	0.899	14.32
TNBGC 1 10	TN90	X132 12	N/A	Fuel Plates		221	15.93	0.899	14.32
TNBGC 1 10	TN90	X132 13	N/A	Fuel Plates		256	18.45	0.899	16.58
TNBGC 1 10	TN90	X132 14	N/A	Fuel Plates		254	18.30	0.899	16.45
TNBGC 1 10	TN90	X132 15	N/A	Fuel Plates		259	18.66	0.899	16.78
TNBGC 1 10	TN90	X132 16	N/A	Fuel Plates		289	20.83	0.899	18.72
TNBGC 1 10	TN90	X132 17	N/A	Fuel Plates		289	20.83	0.899	18.72
TNBGC 1 10	TN90	X132 18	N/A	Fuel Plates		287	20.68	0.899	18.59
TNBGC 1 10	TN90	MXC1 1	N/A	Fuel Plates		124	9.21	0.901	8.30
TNBGC 1 10	TN90	MXC1 2	N/A	Fuel Plates		123	9.14	0.901	8.24
TNBGC 1 10	TN90	MXC1 3	N/A	Fuel Plates		122	9.06	0.901	8.17
TNBGC 1 10	TN90	MXC1 4	N/A	Fuel Plates		155	11.51	0.901	10.38
TNBGC 1 10	TN90	MXC1 5	N/A	Fuel Plates		157	11.66	0.901	10.51
TNBGC 1 10	TN90	MXC1 6	N/A	Fuel Plates		155	11.51	0.901	10.38
TNBGC 1 10	TN90	MXC1 7	N/A	Fuel Plates		190	14.11	0.901	12.72
TNBGC 1 10	TN90	MXC1 8	N/A	Fuel Plates		190	14.11	0.901	12.72
TNBGC 1 10	TN90	MXC1 9	N/A	Fuel Plates		192	14.26	0.901	12.85
TNBGC 1 10	TN90	MXC1 10	N/A	Fuel Plates		222	16.49	0.901	14.86
TNBGC 1 10	TN90	MXC1 11	N/A	Fuel Plates		221	16.41	0.901	14.80
TNBGC 1 10	TN90	MXC1 12	N/A	Fuel Plates		223	16.56	0.901	14.93
TNBGC 1 10	TN90	MXC1 13	N/A	Fuel Plates		257	19.09	0.901	17.21
TNBGC 1 10	TN90	MXC1 14	N/A	Fuel Plates		258	19.16	0.901	17.27
TNBGC 1 10	TN90	MXC1 15	N/A	Fuel Plates		255	18.94	0.901	17.07
TNBGC 1 10	TN90	MXC1 16	N/A	Fuel Plates		276	20.50	0.901	18.48
TNBGC 1 10	TN90	MXC1 17	N/A	Fuel Plates		274	20.35	0.901	18.34
TNBGC 1 10	TN90	MXC1 18	N/A	Fuel Plates		276	20.50	0.901	18.48
						Total on this page of Form OR-658E-1	541.682		487.594
						Grand Total on Form OR-658E-1 (all pages)	**541.682**		**487.594**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements

MATERIAL DATA - Part 1

Declaration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 9	TN90	G905 1	N/A	Fuel Plates		112	13.94	0.899	12.53
TNBGC 1 9	TN90	G905 2	N/A	Fuel Plates		112	13.94	0.899	12.53
TNBGC 1 9	TN90	G905 3	N/A	Fuel Plates		112	13.94	0.899	12.53
TNBGC 1 9	TN90	G905 4	N/A	Fuel Plates		144	17.92	0.899	16.11
TNBGC 1 9	TN90	G905 5	N/A	Fuel Plates		145	18.05	0.899	16.23
TNBGC 1 9	TN90	G905 6	N/A	Fuel Plates		145	18.05	0.899	16.23
TNBGC 1 9	TN90	G905 7	N/A	Fuel Plates		176	21.90	0.899	19.70
TNBGC 1 9	TN90	G905 8	N/A	Fuel Plates		174	21.65	0.899	19.47
TNBGC 1 9	TN90	G905 9	N/A	Fuel Plates		177	22.03	0.899	19.81
TNBGC 1 9	TN90	G906 1	N/A	Fuel Plates		112	13.92	0.899	12.52
TNBGC 1 9	TN90	G906 2	N/A	Fuel Plates		112	13.92	0.899	12.52
TNBGC 1 9	TN90	G906 3	N/A	Fuel Plates		144	17.89	0.899	16.09
TNBGC 1 9	TN90	G906 4	N/A	Fuel Plates		145	18.02	0.899	16.20
TNBGC 1 9	TN90	G906 5	N/A	Fuel Plates		145	18.02	0.899	16.20
TNBGC 1 9	TN90	G906 6	N/A	Fuel Plates		176	21.87	0.899	19.67
TNBGC 1 9	TN90	G906 7	N/A	Fuel Plates		177	22.00	0.899	19.78
TNBGC 1 9	TN90	G906 8	N/A	Fuel Plates		177	22.00	0.899	19.78
				Total on this page of Form OR-658E-1			309.04		277.89
				Grand Total on Form OR-658E-1 (all pages)			**309.04**		**277.89**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1

aration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 8	TN90	G903 1	N/A	Fuel Plates		112	14.04	0.899	12.63
TNBGC 1 8	TN90	G903 2	N/A	Fuel Plates		112	14.04	0.899	12.63
TNBGC 1 8	TN90	G903 3	N/A	Fuel Plates		112	14.04	0.899	12.63
TNBGC 1 8	TN90	G903 4	N/A	Fuel Plates		143	17.93	0.899	16.12
TNBGC 1 8	TN90	G903 5	N/A	Fuel Plates		142	17.80	0.899	16.01
TNBGC 1 8	TN90	G903 6	N/A	Fuel Plates		144	18.06	0.899	16.24
TNBGC 1 8	TN90	G903 7	N/A	Fuel Plates		177	22.19	0.899	19.96
TNBGC 1 8	TN90	G903 8	N/A	Fuel Plates		174	21.82	0.899	19.62
TNBGC 1 8	TN90	G903 9	N/A	Fuel Plates		173	21.69	0.899	19.51
TNBGC 1 8	TN90	G904 1	N/A	Fuel Plates		112	13.99	0.899	12.58
TNBGC 1 8	TN90	G904 2	N/A	Fuel Plates		112	13.99	0.899	12.58
TNBGC 1 8	TN90	G904 3	N/A	Fuel Plates		111	13.87	0.899	12.47
TNBGC 1 8	TN90	G904 4	N/A	Fuel Plates		143	17.86	0.899	16.06
TNBGC 1 8	TN90	G904 5	N/A	Fuel Plates		144	17.99	0.899	16.18
TNBGC 1 8	TN90	G904 6	N/A	Fuel Plates		144	17.99	0.899	16.18
TNBGC 1 8	TN90	G904 7	N/A	Fuel Plates		177	22.11	0.899	19.88
TNBGC 1 8	TN90	G904 8	N/A	Fuel Plates		175	21.86	0.899	19.65
TNBGC 1 8	TN90	G904 9	N/A	Fuel Plates		175	21.86	0.899	19.66
					Total on this page of Form OR-658E-1		323.13		290.57
					Grand Total on Form OR-658E-1 (all pages)		**323.13**		**290.57**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1

Declaration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 7	TN90	G901 1	N/A	Fuel Plates		108	13.78	0.899	12.39
TNBGC 1 7	TN90	G901 2	N/A	Fuel Plates		107	13.65	0.899	12.26
TNBGC 1 7	TN90	G901 3	N/A	Fuel Plates		107	13.65	0.899	12.26
TNBGC 1 7	TN90	G901 4	N/A	Fuel Plates		136	17.35	0.899	15.61
TNBGC 1 7	TN90	G901 5	N/A	Fuel Plates		140	17.86	0.899	16.06
TNBGC 1 7	TN90	G901 6	N/A	Fuel Plates		140	17.86	0.899	16.06
TNBGC 1 7	TN90	G901 7	N/A	Fuel Plates		172	21.94	0.899	19.74
TNBGC 1 7	TN90	G901 8	N/A	Fuel Plates		170	21.69	0.899	19.51
TNBGC 1 7	TN90	G901 9	N/A	Fuel Plates		170	21.69	0.899	19.51
TNBGC 1 7	TN90	G902 1	N/A	Fuel Plates		107	13.77	0.899	12.38
TNBGC 1 7	TN90	G902 2	N/A	Fuel Plates		108	13.90	0.899	12.49
TNBGC 1 7	TN90	G902 3	N/A	Fuel Plates		107	13.77	0.899	12.38
TNBGC 1 7	TN90	G902 4	N/A	Fuel Plates		136	17.50	0.899	15.73
TNBGC 1 7	TN90	G902 5	N/A	Fuel Plates		140	18.02	0.899	16.20
TNBGC 1 7	TN90	G902 6	N/A	Fuel Plates		139	17.89	0.899	16.08
TNBGC 1 7	TN90	G902 7	N/A	Fuel Plates		169	21.75	0.899	19.55
TNBGC 1 7	TN90	G902 8	N/A	Fuel Plates		169	21.75	0.899	19.55
TNBGC 1 7	TN90	G902 9	N/A	Fuel Plates		171	22.01	0.899	19.78
					Total on this page of Form OR-658E-1		319.82		287.57
					Grand Total on Form OR-658E-1 (all pages)		**319.82**		**287.57**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1 ration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1									
Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEU ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 6	TN90	ATR213/7 1	N/A	Fuel Plates		114	13.32	0.899	11.98
TNBGC 1 6	TN90	ATR213/7 2	N/A	Fuel Plates		121	14.14	0.899	12.72
TNBGC 1 6	TN90	ATR213/7 3	N/A	Fuel Plates		132	15.43	0.899	13.87
TNBGC 1 6	TN90	ATR213/7 4	N/A	Fuel Plates		152	17.76	0.899	15.97
TNBGC 1 6	TN90	ATR213/7 5	N/A	Fuel Plates		160	18.70	0.899	16.81
TNBGC 1 6	TN90	ATR213/7 6	N/A	Fuel Plates		171	19.98	0.899	17.97
TNBGC 1 6	TN90	ATR213/7 7	N/A	Fuel Plates		183	21.39	0.899	19.23
TNBGC 1 6	TN90	ATR213/7 8	N/A	Fuel Plates		196	22.90	0.899	20.60
TNBGC 1 6	TN90	ATR213/7 9	N/A	Fuel Plates		207	24.19	0.899	21.75
TNBGC 1 6	TN90	ATR213/7 10	N/A	Fuel Plates		221	25.83	0.899	23.23
TNBGC 1 6	TN90	ATR213/7 11	N/A	Fuel Plates		231	26.99	0.899	24.28
TNBGC 1 6	TN90	ATR213/7 12	N/A	Fuel Plates		250	29.21	0.899	26.27
TNBGC 1 6	TN90	ATR213/7 13	N/A	Fuel Plates		267	31.20	0.899	28.06
TNBGC 1 6	TN90	ATR213/8 1	N/A	Fuel Plates		112	13.13	0.899	11.80
TNBGC 1 6	TN90	ATR213/8 2	N/A	Fuel Plates		122	14.30	0.899	12.86
TNBGC 1 6	TN90	ATR213/8 3	N/A	Fuel Plates		132	15.47	0.899	13.91
TNBGC 1 6	TN90	ATR213/8 4	N/A	Fuel Plates		149	17.46	0.899	15.70
TNBGC 1 6	TN90	ATR213/8 5	N/A	Fuel Plates		162	18.99	0.899	17.07
TNBGC 1 6	TN90	ATR213/8 6	N/A	Fuel Plates		171	20.04	0.899	18.02
TNBGC 1 6	TN90	ATR213/8 7	N/A	Fuel Plates		188	22.03	0.899	19.81
TNBGC 1 6	TN90	ATR213/8 8	N/A	Fuel Plates		195	22.85	0.899	20.55
TNBGC 1 6	TN90	ATR213/8 9	N/A	Fuel Plates		208	24.38	0.899	21.92
TNBGC 1 6	TN90	ATR213/8 10	N/A	Fuel Plates		221	25.90	0.899	23.29
TNBGC 1 6	TN90	ATR213/8 11	N/A	Fuel Plates		232	27.19	0.899	24.45
TNBGC 1 6	TN90	ATR213/8 12	N/A	Fuel Plates		251	29.42	0.899	26.45
TNBGC 1 6	TN90	ATR213/8 13	N/A	Fuel Plates		255	29.89	0.899	26.88
					Total on this page of Form OR-658E-1		562.09		505.49
					Grand Total on Form OR-658E-1 (all pages)		562.09		505.49

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 5	TN90	ATR213/ 5 1	N/A	Fuel Plates		114	13.37	0.899	12.03
TNBGC 1 5	TN90	ATR213/ 5 2	N/A	Fuel Plates		122	14.31	0.899	12.87
TNBGC 1 5	TN90	ATR213/ 5 3	N/A	Fuel Plates		133	15.60	0.899	14.03
TNBGC 1 5	TN90	ATR213/ 5 4	N/A	Fuel Plates		150	17.59	0.899	15.82
TNBGC 1 5	TN90	ATR213/ 5 5	N/A	Fuel Plates		158	18.53	0.899	16.67
TNBGC 1 5	TN90	ATR213/ 5 6	N/A	Fuel Plates		171	20.06	0.899	18.04
TNBGC 1 5	TN90	ATR213/ 5 7	N/A	Fuel Plates		185	21.70	0.899	19.51
TNBGC 1 5	TN90	ATR213/ 5 8	N/A	Fuel Plates		195	22.87	0.899	20.57
TNBGC 1 5	TN90	ATR213/ 5 9	N/A	Fuel Plates		212	24.87	0.899	22.36
TNBGC 1 5	TN90	ATR213/ 5 10	N/A	Fuel Plates		220	25.81	0.899	23.21
TNBGC 1 5	TN90	ATR213/ 5 11	N/A	Fuel Plates		230	26.98	0.899	24.26
TNBGC 1 5	TN90	ATR213/ 5 12	N/A	Fuel Plates		249	29.21	0.899	26.27
TNBGC 1 5	TN90	ATR213/ 5 13	N/A	Fuel Plates		257	30.15	0.899	27.11
TNBGC 1 5	TN90	ATR213/6 1	N/A	Fuel Plates		113	13.24	0.899	11.91
TNBGC 1 5	TN90	ATR213/6 2	N/A	Fuel Plates		122	14.30	0.899	12.86
TNBGC 1 5	TN90	ATR213/6 3	N/A	Fuel Plates		132	15.47	0.899	13.91
TNBGC 1 5	TN90	ATR213/6 4	N/A	Fuel Plates		153	17.93	0.899	16.13
TNBGC 1 5	TN90	ATR213/6 5	N/A	Fuel Plates		160	18.75	0.899	16.86
TNBGC 1 5	TN90	ATR213/6 6	N/A	Fuel Plates		170	19.92	0.899	17.92
TNBGC 1 5	TN90	ATR213/6 7	N/A	Fuel Plates		183	21.45	0.899	19.29
TNBGC 1 5	TN90	ATR213/6 8	N/A	Fuel Plates		195	22.85	0.899	20.55
TNBGC 1 5	TN90	ATR213/6 9	N/A	Fuel Plates		209	24.48	0.899	22.03
TNBGC 1 5	TN90	ATR213/6 10	N/A	Fuel Plates		222	26.02	0.899	23.40
TNBGC 1 5	TN90	ATR213/6 11	N/A	Fuel Plates		232	27.19	0.899	24.45
TNBGC 1 5	TN90	ATR213/6 12	N/A	Fuel Plates		240	28.18	0.899	26.24
TNBGC 1 5	TN90	ATR213/6 13	N/A	Fuel Plates		258	30.24	0.899	27.19
					Total on this page of Form OR-668E-1		562.09		505.49
					Grand Total on Form OR-668E-1 (all pages)		**562.09**		**505.49**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1

ıration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE// ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 4	TN90	ATR213/ 3 1	N/A	Fuel Plates		116	13.57	0.899	12.21
TNBGC 1 4	TN90	ATR213/ 3 2	N/A	Fuel Plates		122	14.27	0.899	12.84
TNBGC 1 4	TN90	ATR213/ 3 3	N/A	Fuel Plates		133	15.56	0.899	13.99
TNBGC 1 4	TN90	ATR213/ 3 4	N/A	Fuel Plates		150	17.55	0.899	15.78
TNBGC 1 4	TN90	ATR213/ 3 5	N/A	Fuel Plates		159	18.60	0.899	16.73
TNBGC 1 4	TN90	ATR213/ 3 6	N/A	Fuel Plates		170	19.89	0.899	17.89
TNBGC 1 4	TN90	ATR213/ 3 7	N/A	Fuel Plates		189	22.11	0.899	19.89
TNBGC 1 4	TN90	ATR213/ 3 8	N/A	Fuel Plates		195	22.82	0.899	20.52
TNBGC 1 4	TN90	ATR213/ 3 9	N/A	Fuel Plates		212	24.81	0.899	22.31
TNBGC 1 4	TN90	ATR213/ 3 10	N/A	Fuel Plates		221	25.86	0.899	23.25
TNBGC 1 4	TN90	ATR213/ 3 11	N/A	Fuel Plates		230	26.91	0.899	24.20
TNBGC 1 4	TN90	ATR213/ 3 12	N/A	Fuel Plates		248	29.13	0.899	26.20
TNBGC 1 4	TN90	ATR213/ 3 13	N/A	Fuel Plates		258	29.95	0.899	26.94
TNBGC 1 4	TN90	ATR213/4 1	N/A	Fuel Plates		111	12.99	0.899	11.68
TNBGC 1 4	TN90	ATR213/4 2	N/A	Fuel Plates		122	14.28	0.899	12.84
TNBGC 1 4	TN90	ATR213/4 3	N/A	Fuel Plates		133	15.57	0.899	14.00
TNBGC 1 4	TN90	ATR213/4 4	N/A	Fuel Plates		147	17.21	0.899	15.47
TNBGC 1 4	TN90	ATR213/4 5	N/A	Fuel Plates		157	18.38	0.899	16.53
TNBGC 1 4	TN90	ATR213/4 6	N/A	Fuel Plates		171	20.02	0.899	18.00
TNBGC 1 4	TN90	ATR213/4 7	N/A	Fuel Plates		185	21.65	0.899	19.47
TNBGC 1 4	TN90	ATR213/4 8	N/A	Fuel Plates		198	22.84	0.899	20.63
TNBGC 1 4	TN90	ATR213/4 9	N/A	Fuel Plates		211	24.70	0.899	22.21
TNBGC 1 4	TN90	ATR213/4 10	N/A	Fuel Plates		222	25.99	0.899	23.37
TNBGC 1 4	TN90	ATR213/4 11	N/A	Fuel Plates		232	27.16	0.899	24.42
TNBGC 1 4	TN90	ATR213/4 12	N/A	Fuel Plates		250	29.26	0.899	26.32
TNBGC 1 4	TN90	ATR213/4 13	N/A	Fuel Plates		264	30.90	0.899	27.79
				Total on this page of Form OR-658E-1			562.09		505.49
				Grand Total on Form OR-658E-1 (all pages)			562.09		505.49

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-858C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COE/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 3	TN90	ATR213/ 1 1	N/A	Fuel Plates		112	13.10	0.899	11.78
TNBGC 1 3	TN90	ATR213/ 1 2	N/A	Fuel Plates		122	14.27	0.899	12.83
TNBGC 1 3	TN90	ATR213/ 1 3	N/A	Fuel Plates		133	15.56	0.899	13.99
TNBGC 1 3	TN90	ATR213/ 1 4	N/A	Fuel Plates		152	17.78	0.899	15.99
TNBGC 1 3	TN90	ATR213/ 1 5	N/A	Fuel Plates		162	18.95	0.899	17.04
TNBGC 1 3	TN90	ATR213/ 1 6	N/A	Fuel Plates		171	20.00	0.899	17.99
TNBGC 1 3	TN90	ATR213/ 1 7	N/A	Fuel Plates		189	22.10	0.899	19.88
TNBGC 1 3	TN90	ATR213/ 1 8	N/A	Fuel Plates		195	22.81	0.899	20.51
TNBGC 1 3	TN90	ATR213/ 1 9	N/A	Fuel Plates		212	24.79	0.899	22.30
TNBGC 1 3	TN90	ATR213/ 1 10	N/A	Fuel Plates		220	25.73	0.899	23.14
TNBGC 1 3	TN90	ATR213/ 1 11	N/A	Fuel Plates		230	26.90	0.899	24.19
TNBGC 1 3	TN90	ATR213/ 1 12	N/A	Fuel Plates		248	29.01	0.899	26.08
TNBGC 1 3	TN90	ATR213/ 1 13	N/A	Fuel Plates		257	30.06	0.899	27.03
TNBGC 1 3	TN90	ATR213/2 1	N/A	Fuel Plates		114	13.34	0.899	12.00
TNBGC 1 3	TN90	ATR213/2 2	N/A	Fuel Plates		122	14.27	0.899	12.84
TNBGC 1 3	TN90	ATR213/2 3	N/A	Fuel Plates		134	15.68	0.899	14.10
TNBGC 1 3	TN90	ATR213/2 4	N/A	Fuel Plates		152	17.78	0.899	15.99
TNBGC 1 3	TN90	ATR213/2 5	N/A	Fuel Plates		160	18.72	0.899	16.84
TNBGC 1 3	TN90	ATR213/2 6	N/A	Fuel Plates		172	20.12	0.899	18.10
TNBGC 1 3	TN90	ATR213/2 7	N/A	Fuel Plates		187	21.88	0.899	19.68
TNBGC 1 3	TN90	ATR213/2 8	N/A	Fuel Plates		195	22.82	0.899	20.52
BGC 1 3	TN90	ATR213/2 9	N/A	Fuel Plates		208	24.34	0.899	21.89
GC 1 3	TN90	ATR213/2 10	N/A	Fuel Plates		222	25.98	0.899	23.36
TNBGC 1 3	TN90	ATR213/2 11	N/A	Fuel Plates		230	26.91	0.899	24.20
TNBGC 1 3	TN90	ATR213/2 12	N/A	Fuel Plates		250	29.25	0.899	26.31
TNBGC 1 3	TN90	ATR213/2 13	N/A	Fuel Plates		256	29.95	0.899	26.94
					Total on this page of Form OR-668E-1		562.09		505.49
					Grand Total on Form OR-668E-1 (all pages)		**562.09**		**505.49**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1

ıration Number: CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEII/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 2	TN90	M614 1	N/A	Fuel Plates		142	11.23	0.898	10.10
TNBGC 1 2	TN90	M614 2	N/A	Fuel Plates		143	11.31	0.901	10.17
TNBGC 1 2	TN90	M614 3	N/A	Fuel Plates		142	11.23	0.901	10.10
TNBGC 1 2	TN90	M614 4	N/A	Fuel Plates		176	13.92	0.901	12.52
TNBGC 1 2	TN90	M614 5	N/A	Fuel Plates		176	13.92	0.901	12.52
TNBGC 1 2	TN90	M614 6	N/A	Fuel Plates		175	13.84	0.901	12.44
TNBGC 1 2	TN90	M614 7	N/A	Fuel Plates		209	16.52	0.901	14.86
TNBGC 1 2	TN90	M614 8	N/A	Fuel Plates		209	16.52	0.901	14.86
TNBGC 1 2	TN90	M614 9	N/A	Fuel Plates		209	16.52	0.901	14.86
TNBGC 1 2	TN90	M614 10	N/A	Fuel Plates		241	19.05	0.901	17.14
TNBGC 1 2	TN90	M614 11	N/A	Fuel Plates		239	18.90	0.901	17.00
TNBGC 1 2	TN90	M614 12	N/A	Fuel Plates		242	19.13	0.901	17.21
TNBGC 1 2	TN90	M614 13	N/A	Fuel Plates		272	21.51	0.901	19.34
TNBGC 1 2	TN90	M614 14	N/A	Fuel Plates		270	21.35	0.901	19.20
TNBGC 1 2	TN90	M614 15	N/A	Fuel Plates		271	21.43	0.901	19.27
TNBGC 1 2	TN90	X173 1	N/A	Fuel Plates		113	8.86	0.898	7.80
TNBGC 1 2	TN90	X173 2	N/A	Fuel Plates		112	8.61	0.898	7.73
TNBGC 1 2	TN90	X173 3	N/A	Fuel Plates		114	8.76	0.898	7.87
TNBGC 1 2	TN90	X173 4	N/A	Fuel Plates		146	11.22	0.898	10.08
TNBGC 1 2	TN90	X173 5	N/A	Fuel Plates		147	11.30	0.898	10.15
TNBGC 1 2	TN90	X173 6	N/A	Fuel Plates		148	11.37	0.898	10.22
TNBGC 1 2	TN90	X173 7	N/A	Fuel Plates		178	13.68	0.898	12.29
TNBGC 1 2	TN90	X173 8	N/A	Fuel Plates		179	13.76	0.898	12.36
TNBGC 1 2	TN90	X173 9	N/A	Fuel Plates		177	13.60	0.898	12.22
TNBGC 1 2	TN90	X173 10	N/A	Fuel Plates		209	16.06	0.898	14.43
TNBGC 1 2	TN90	X173 11	N/A	Fuel Plates		214	16.45	0.898	14.78
TNBGC 1 2	TN90	X173 12	N/A	Fuel Plates		210	16.14	0.898	14.50
TNBGC 1 2	TN90	X173 13	N/A	Fuel Plates		245	18.83	0.898	16.92
TNBGC 1 2	TN90	X173 14	N/A	Fuel Plates		249	19.06	0.898	17.12
TNBGC 1 2	TN90	X173 15	N/A	Fuel Plates		245	18.83	0.898	16.92
TNBGC 1 2	TN90	X173 16	N/A	Fuel Plates		274	21.06	0.898	18.92
TNBGC 1 2	TN90	X173 17	N/A	Fuel Plates		270	20.75	0.898	18.64
TNBGC 1 2	TN90	X173 18	N/A	Fuel Plates		274	21.05	0.898	18.92
					Total on this page of Form OR-658E-1		515.59		463.45
					Grand Total on Form OR-658E-1 (all pages)		**515.59**		**463.45**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular

MATERIAL DATA - Part 1 **Declaration Number:** CERCA-05-01

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description**	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TNBGC 1 1	TN90	G003 1	N/A	Fuel Plates		130	15.28	0.901	13.75
TNBGC 1 1	TN90	G003 2	N/A	Fuel Plates		128	15.02	0.901	13.54
TNBGC 1 1	TN90	G003 3	N/A	Fuel Plates		129	15.14	0.901	13.64
TNBGC 1 1	TN90	G003 4	N/A	Fuel Plates		162	19.01	0.901	17.13
TNBGC 1 1	TN90	G003 5	N/A	Fuel Plates		160	18.78	0.901	16.92
TNBGC 1 1	TN90	G003 6	N/A	Fuel Plates		162	19.01	0.901	17.13
TNBGC 1 1	TN90	G003 7	N/A	Fuel Plates		195	22.88	0.901	20.62
TNBGC 1 1	TN90	G003 8	N/A	Fuel Plates		194	22.77	0.901	20.52
TNBGC 1 1	TN90	G003 9	N/A	Fuel Plates		195	22.88	0.901	20.62
TNBGC 1 1	TN90	G003 10	N/A	Fuel Plates		226	26.53	0.901	23.90
TNBGC 1 1	TN90	G003 11	N/A	Fuel Plates		225	26.41	0.901	23.79
TNBGC 1 1	TN90	G003 12	N/A	Fuel Plates		226	26.53	0.901	23.90
TNBGC 1 1	TN90	G003 13	N/A	Fuel Plates		266	31.22	0.901	28.13
TNBGC 1 1	TN90	G003 14	N/A	Fuel Plates		253	30.87	0.901	27.81
TNBGC 1 1	TN90	G003 15	N/A	Fuel Plates		266	31.22	0.901	28.13
TNBGC 1 1	TN90	G003 16	N/A	Fuel Plates		287	33.69	0.901	30.35
TNBGC 1 1	TN90	G003 17	N/A	Fuel Plates		295	34.62	0.901	31.20
TNBGC 1 1	TN90	G003 18	N/A	Fuel Plates		289	33.92	0.901	30.56
TNBGC 1 1	TN90	S277 1	N/A	Fuel Plates		145	11.15	0.899	10.03
TNBGC 1 1	TN90	S277 2	N/A	Fuel Plates		149	11.46	0.899	10.30
TNBGC 1 1	TN90	S277 3	N/A	Fuel Plates		148	11.38	0.899	10.24
TNBGC 1 1	TN90	S277 4	N/A	Fuel Plates		180	13.84	0.899	12.45
TNBGC 1 1	TN90	S277 5	N/A	Fuel Plates		181	13.92	0.899	12.52
TNBGC 1 1	TN90	S277 6	N/A	Fuel Plates		180	13.84	0.899	12.45
TNBGC 1 1	TN90	S277 7	N/A	Fuel Plates		210	16.15	0.899	14.52
TNBGC 1 1	TN90	S277 8	N/A	Fuel Plates		207	15.92	0.899	14.32
TNBGC 1 1	TN90	S277 9	N/A	Fuel Plates		213	16.38	0.899	14.73
TNBGC 1 1	TN90	S277 10	N/A	Fuel Plates		246	18.91	0.899	17.01
TNBGC 1 1	TN90	S277 11	N/A	Fuel Plates		248	19.07	0.899	17.15
TNBGC 1 1	TN90	S277 12	N/A	Fuel Plates		244	18.76	0.899	16.87
TNBGC 1 1	TN90	S277 13	N/A	Fuel Plates		274	21.07	0.899	18.95
TNBGC 1 1	TN90	S277 14	N/A	Fuel Plates		272	20.91	0.899	18.81
TNBGC 1 1	TN90	S277 15	N/A	Fuel Plates		268	20.61	0.899	18.53
					Total on this page of Form OR-658E-1		689.12		620.52
					Grand Total on Form OR-658E-1 (all pages)		**689.12**		**620.52**

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular equilibrium), impurities, etc.; Provide description of matrix for mixtures.**

INNER (PRIMARY) CONTAINER DATA - Part 2

Declaration Number: CERCA-05-01

Inner (Primary) Container Data - Part 2								
Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D-1) (if applicable)	Gross Weight of Inner (Primary) Container (grams)	Tare Weight of Inner (Primary) Container (grams)	Net Weight of Inner (Primary) Container (grams)	Removable Surface Contamination on the Inner (Primary) Container (Alpha) dpm/100cm^2	Removable Surface Contamination on the Inner (Primary) Container (Beta-Gamma) dpm/100cm^2	Gamma Exposure @ 1 foot from Outer Surface of Inner (Primary) Container (mR/hr)	Deep Dose (gamma + neutron @ 1 foot from Inner (Primary) Container) (mrem/hr)
TNBGC 1 1	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 2	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 3	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 4	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 5	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 6	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 7	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 8	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 9	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 10	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 11	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 12	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 13	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 14	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 15	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 16	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 17	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 18	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 19	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 20	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 21	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 22	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 23	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 24	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 25	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 26	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 27	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 28	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 29	TN90	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
Total Weights on this page of Form OR-658D-2								
Grand Total Weights on Form OR-658D-2 (all pages)								

SHIPPING CONTAINER DATA - Part 2

Declaration Number: CERCA-05-01

Shipping Container Data - Part 2

Shipping Container Serial/ID Number (from Form [illegible])	H:X Ratio (if applicable)	H:X Ratio Option Number (see table below)	Radioactive (RAD) Label Category (I, II, III)	Transportation Index (TI) (required for RAD II and RAD III only)	Removable Surface Contamination on the Shipping Container (Alpha) dpm/100cm^2	Removable Surface Contamination on the Shipping Container (Beta-Gamma) dpm/100cm^2	Gamma Exposure @ 1 foot from Outer Surface of the Shipping Container (mR/hr)	Deep Dose (gamma + neutron @ 1 foot from the Shipping Container) (mrem/hr)
TNBGC 1 1	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 2	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 3	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 4	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 5	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 6	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 7	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 8	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 9	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 10	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 11	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 12	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 13	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 14	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 15	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 16	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 17	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 18	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 19	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 20	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 21	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 22	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 23	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 24	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 25	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 26	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 27	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 28	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
TNBGC 1 29	N/A	NA	I or II	Max 0.3	TBD after packaging	TBD after packaging	TBD after packaging	TBD after packaging
Total number of TI Units included on this page of Form OR-658C-2								
Grand Total number of TI units included on Form OR-658C-2 (all pages)								

H:X Statement for Fissile Material Transfers

Option:

1 A DOT Spec 6M was used for this material. This package contains no more than 1.6 kg of U-235. The uranium is enriched in U-235 to a weight percent of _____. (There is no limit in this configuration.) The H:X ratio, including all sources of hydrogen within the DOT Spec 2R inner containment, is not greater than three (3).
The calculated H:X ratio is _____.

2 A DOT Spec 6M was used for this material. This package contains uranium metal or alloy with no more than 13.5 kg of U-235. The uranium is enriched in U-235 to a weight percent of _____. (Maximum allowed is 93.5%.) No hydrogen is interspersed with the fissile material, therefore the H:X ratio is zero (0).

3 A DOT Spec 6M was used for this material. This package contains a uranium compound with no more than 32 kg of U-235. The uranium is enriched in U-235 to a weight percent of _____.

4 A DOT Spec 6M was used for this material. This package contains a uranium compound with no more than 19.5 kg of U-235. The uranium is enriched in U-235 to a weight percent of _____. (Maximum allowed is 93.5%.) The H:X ratio, considering the hydrogen interspersed with the fissile material, is no greater than three (3).
The calculated H:X ratio is _____.

5 The package used for this material was _____ which is authorized in Regulatory Reference _____.
The package contains uranium __metal, __alloy, or __compound with a U-235 weight percent of _____.
The maximum allowed weight percent for this configuration is _____. The calculated H:X ratio is _____ which is below the regulatory limit of _____.

INNER (PRIMARY) CONTAINER DATA - Part 1

eclaration Number: CERCA-05-01

The inner (primary) container is a stand-alone container that houses the material item(s). The inner (primary) container can be removed from the shipping container and must have an NMC&A approved TID attached. The inner (primary) container may be a stainless steel paint can, crimp-sealed can, specifically designed container, etc. The inner (primary) container may also house additional convenience packaging such as single or multiple polybottles, plastic bags, etc. that contain the actual material item(s). The gross, tare, a net weights will be established for the inner (primary) container. The inner (primary) container is not the same as the inner containment vessel (e.g., 2R).

Is packaging information you are providing in the table below based on actual or proposed packaging?		Actual packaging that meets or exceeds shipping requirements	X	Proposed packaging that meets or exceeds shipping requirements
		Approximate date (mo/yr) material was packaged	Jan-06	Approximate date (mo/yr) material will be packaged

Inner (Primary) Container Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (if applicable)	NMC&A Approved TID Number	Inner (Primary) Container Type (e.g., paint can, crimp-sealed can, etc.)	Inner (Primary) Container Size (e.g., 1-gallon, 2-liter, etc.)	Inner (Primary) Container Construction Material (e.g., stainless steel, etc.)	Type of Lid Closure on Inner (Primary) Container (e.g., screw-cap, paint lid, pressed, crimped, etc.)	Outer Diameter of Inner (Primary) Container (inches)	Overall Height of Inner (Primary) Container (inches)	Packing Material Within Inner (Primary) Container (if applicable)
TNBGC 1 1	TN90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 2	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 3	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 4	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 5	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 6	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 7	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 8	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 9	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 10	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 11	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 12	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 13	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 14	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 15	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 16	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 17	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 18	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 19	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 20	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Bar
TNBGC 1 21	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Bar
TNBGC 1 22	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 23	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 24	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 25	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 26	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 27	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 28	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
TNBGC 1 29	TN 90	N/A	TN90	N/A	N/A	N/A	110 mm	1392 mm	Metal Banding
	29	Total number of inner (primary) containers on this page of Form OR-658D-1							
		Grand Total number of inner (primary) containers on Form OR-658D-1 (all pages)							

SHIPPING CONTAINER DATA - Part 1

Declaration Number: CERCA-05-01

The Shipping Container is the outermost element of a shipping package and is also known as the "outer confinement" package.

Is packaging information you are providing in the table below based on actual or proposed packaging?		Actual packaging that meets or exceeds shipping requirements	X	Proposed packaging that meets or exceeds shipping requirements
		Approximate date (mo/yr) material was packaged		Approximate date (mo/yr) material will be packaged
			Jan-06	

Shipping Container Data - Part 1

Type A or Type B Packaging (A or B)	Shipping Container Serial/ID Number	Shipping Authorization for Type B and Type A Fissile Packaging (e.g., NRC CoC Number, NNSA OTC Number, or DOT-approved package)	NRC CoC or NNSA OTC Revision Number for Type B and Type A Fissile Packaging	Shipping Container Security Seal/TID Number	Shipping Container Size (e.g., 55-gal)	Shipping Container Construction Material (e.g. stainless steel)	Type Packing Material used within the Shipping Container (e.g. celotex)	Gross Weight (Shipping Container + Contents) (Indicate unit of measure)
B	TNBGC 1 1	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 2	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 3	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 4	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 5	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 6	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 7	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 8	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 9	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 10	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 11	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 12	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 13	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 14	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 15	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 16	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 17	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 18	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 19	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 20	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 21	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 22	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 23	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 24	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 25	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 26	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 27	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 28	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
B	TNBGC 1 29	USA/0492/B(U) F-96	Revision 7	TBD after packaging	(1.8*0.6*0.6)meter	Al+neutron absorber+Stainless steel	None	After loading
	29	Total number of shipping containers on this page of Form OR-658C-1				Total Gross Weight (kgs) on this page of Form OR-658C-1		
		Grand Total number of shipping containers on Form OR-658C-1 (all pages)				Grand Total Gross Weight (kgs) on Form OR-658C-1 (all pages)		

CoC=Certificate of Compliance
OTC=Offsite Transport Certification

DECLARATION DESCRIPTION **Declaration Number:** CERCA-05-01

MATERIAL

General Description of Material: (including type of material, physical and chemical form, description of matrix for mixtures, amount, etc.)

Fuel plate cladded with Aluminium alloy , core made of U AL distributed in an alumihium matrix

History of Material: (including original purpose of the material and detailed historical information concerning processing, handling and storage of the material that may have caused contamination or adulteration of the material.)

Fuel ,plates stored in the ROMANS facility of CERCA since 1997 ,this paltes have been irradiated in a subcritica experiment in the BR2 reactor before 1988

PACKAGING

General Description of Packaging (Inner to Outer)

Example:

Packaging that is in direct contact with material:	*Material (foil) in* **1-liter polybottle**
Next level of packaging:	*Polybottle in* **plastic bag**
Next level of packaging:	*Plastic bag in* **paint can**
Next level of packaging:	*Paint can in* **stainless steel 5-gallon can**
Next level of packaging:	N/A
Next level of packaging:	N/A
Next level of packaging:	N/A
Shipping Container:	*5-gallon can in* **stainless steel 55-gallon drum with vermiculite**

For This Declaration:

Packaging that is in direct contact with material:	Metal Banding
Next level of packaging:	TN 90 Inner container
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Shipping Container:	TNBGC-1

SHIPMENT

RIS location of material to be shipped from:	ROMANS (France)
Name of **Shipping Site Representative**:	DAVID Frédéric
Shipping Site Rep Phone Number:	(+33) 4 75 05 60 66
Shipping Method (commercial or government):	Government

Form OR-658B (Rev 3/04)

DECLARATION REQUEST

1. DECLARATION REQUEST for URANIUM: [X] SCRAP [ ] STORAGE	2. DECLARATION NUMBER: CERCA-05-01

SECTION I (Items 1-6) - FOR USE BY GENERATOR

INSTRUCTIONS

(1) A scrap or storage declaration package is comprised of completed Forms OR-658A through OR-658G. Please identify if this declaration is submitted as "scrap" or "storage" by placing an "X" in the appropriate box for Item 1.

(2) Please assign a Declaration Number to this package. A Declaration Number is generally comprised of the generator's three letter RIS followed by a dash and four numerical digits for the calendar year the declaration is submitted in, followed by another dash and a three digit number to identify the chronological/sequential numbering for declarations submitted by this RIS for the calendar year (e.g., FZF-2004-001). The Declaration Number assigned in Item 2 of this form should be carried forward to forms OR-658B through OR-658G.

(3) A declaration should be comprised of materials that are of the same material form and constituents.

(4) It is imperative that a complete and concise description of both the material and packaging be furnished with each declaration request. Forms OR-658B through OR-658G must be utilized for this purpose. If material requires repackaging prior to shipment, please provide as much packaging information as possible based on the packaging plan for this material. Indicate on Forms OR-658C-1 and OR-658D-1 if the packaging information provided is actual or proposed.

(5) If material is not available for immediate delivery to a reprocessor, provide a detailed explanation on a separate sheet and attach to this request form.

(6) After all forms have been completed, forward the original package to the shipper's DOE/NNSA Field Office and send copy to the attention of the Central Scrap Management Office, Y-12 National Security Complex, PO Box 2009, Oak Ridge TN 37831-8236.

3. GENERATOR NAME:	CERCA
GENERATOR ADDRESS:	LES BERAUDS BP 1114 26104 ROMANS CEDEX France

Generator Site Representative hereby certifies that the material covered by this request will be in conformance with all applicable regulations.

4. DATE:	5. PRINTED NAME: OBADIA Franck TITLE: Project Manager and Fuel Transport services PHONE NUMBER: (+33) 4 75 05 56 93 E-MAIL ADDRESS: franck.obadia@framatome-ar	6. SIGNATURE: Fobadia

SECTION II (Items 7-9) - FOR CONCURRENCE BY COGNIZANT DOE/NNSA FIELD OFFICE

(Forward signed form to the Y-12 National Security Complex.)

7. DATE:	8. DOE/NNSA FIELD OFFICE NAME:	9. SIGNATURE:

SECTION III (Items 10-16) - FOR USE BY THE CENTRAL SCRAP MANAGEMENT OFFICE (CSMO)

10. RESPONSE:

The uranium scrap listed in Scrap Declaration CERCA-05-01 should be shipped to the Oak Ridge Y-12 Plant for storage, processing, and reuse. Please contact Arlene Tapp at (865) 576-4518 for authorization to ship. Material Control and Accountability (MC&A) conditions should be documented and coordinated through the Y-12 MC&A organization [contact Connie Hall at (865) 241-9044]. A copy of the 741 document should be provided to Becky Eddy, NNSA-YAO. Y-12 should receive the material in Project No. F-NN-4001-090.

Concurrence of Section III by the Y-12 National Security Complex

11. DATE: 1/24/06	12. Y-12 National Security Complex CSMO Manager Patricia B. Helms	13. SIGNATURE: Pat Helms

Concurrence of Section III by the NNSA Y-12 Site Office

14. DATE: 1/31/06	15. NNSA-YSO CSMO Manager Becky G. Eddy	16. SIGNATURE: Becky Eddy

Form OR-658A (Rev 3/04)

Bulk Shielding Reactor (ORNL)

United States Department of Energy
Oak Ridge Operations Office
REQUEST FOR URANIUM SCRAP DISPOSITION

REQUEST NO. FZG-072

SECTION I - (TO BE COMPLETED BY SCRAP GENERATOR)

INSTRUCTIONS

(1) FORWARD THE ORIGINAL TO THE DOE FIELD OFFICE ADMINISTERING THE SCRAP GENERATING CONTRACT. (A COPY SHOULD BE FORWARDED TO THE DOE OFFICE HAVING JURISDICTION OVER THE NUCLEAR MATERIAL WHEN DIFFERENT FROM THE CONTRACTING OFFICE.)

(2) IT IS IMPERATIVE THAT A COMPLETE AND CONCISE DESCRIPTION OF THE SCRAP BE FURNISHED WITH EACH REQUEST. FORMS OR-658C AND OR-658D MUST BE UTILIZED FOR THIS PURPOSE. COMPLETED FORMS OR-658C AND OR-658D SHOULD BE ATTACHED TO, AND IDENTIFIED BY DECLARATION NUMBER IN BLOCK 3 ON THIS FORM. FORM OR-658B, URANIUM SCRAP SHIPPING DATA, AND FORM OR-658E, NON-RCRA CERTIFICATION STATEMENT, SHOULD ALSO BE COMPLETED AND ATTACHED TO THIS REQUEST FORM.

(3) IF A NEGATIVE STATEMENT IS INDICATED FOR ITEM 4 BELOW, GIVE FULL DETAILS ON REVERSE SIDE OF THIS FORM.

1. TO:
U.S. DEPARTMENT OF ENERGY
OAK RIDGE OPERATIONS OFFICE
POST OFFICE BOX 2001
OAK RIDGE, TENNESSEE 37831-8555
ATTN: MANAGER CENTRAL SCRAP MANAGEMENT OFFICE

2. FROM:
Lockheed Martin Energy Research Corporation
Oak Ridge National Laboratory
Post Office 2008
Oak Ridge, Tennessee 37831

3. DECLARATION NUMBERS ATTACHED: FZG-072

4. SCRAP IS AVAILABLE FOR IMMEDIATE DELIVERY TO A REPROCESSOR. X YES ___ NO

REQUESTOR HEREBY CERTIFIES THAT THE SCRAP COVERED BY THIS REQUEST WILL BE IN CONFORMANCE WITH ALL APPLICABLE REGULATIONS AND THAT THE REQUIRED SHIPPING DATA ARE DETAILED ON FORM OR-658B WHICH HAS BEEN ATTACHED HERETO.

5. DATE	6. SIGNATURE OF REQUESTOR	7. NAME AND TITLE
1/26/99	Bryant T. Fowler	Bryant T. Fowler, ORNL NMCCA Manager

SECTION II - CONCURRENCE OF COGNIZANT DOE FIELD OFFICE

THE DESCRIPTIVE AND ALL OTHER DATA ON ATTACHED FORMS OR-658B, OR-658C, OR-658D HAVE BEEN CHECKED AND REVIEWED FOR COMPLETENESS AND ACCURACY. THIS OFFICE HEREBY CERTIFIES THAT DOE HAS THE FINANCIAL RESPONSIBILITY FOR THE RECOVERY AND/OR OTHER DISPOSITION OF THE URANIUM SCRAP COVERED BY THIS REQUEST.

1. DATE	2. SIGNATURE	3. DOE OFFICE
1/27/99		ORNL Site Office

SECTION III - FOR USE BY THE CENTRAL SCRAP MANAGEMENT OFFICE (CSMO) IN REPLYING TO COGNIZANT DOE FIELD OFFICE.

The scrap listed in FZG-072 is currently in storage at the Y-12 Plant. The scrap has been determined to be acceptable for continued storage at Y-12 and should be transferred from project number F-KC-0000-50B to F-DP-0405-512 awaiting processing for future reuse.

DATE	SIGNATURE	TITLE
2-4-99		CSMO Manager

FORM OR-658A (REV. 4/98)

United States Department of Energy
Oak Ridge Operations Office
URANIUM SCRAP SHIPPING DATA

SHIPPING METHOD CODES

A - COMMERCIAL VEHICLE (ARMED ESCORT)
B - COMMERCIAL VEHICLE (LIL)
C - GOVERNMENT VEHICLE (ARMED ESCORT)
D - OTHER METHODS (SPECIFY IN REMARKS)

DECLARATION NO. AND/OR SCRAP LOT NO.	SHIPPING COSTS FROM PRESENT LOCATION OF SCRAP TO:			SHIPPING METHOD CODE	NUMBER OF SHIPMENTS REQUIRED	NUMBER OF SHIPPING CONTAINERS/SHIPMENT	TOTAL NO. TRANSPORT INDEX UNITS/SHIPMENT
	ERWIN, TN	OAK RIDGE, TN	LYNCHBURG, VA				
FZG-072							

REMARKS:

Shipping is not required. Uranium is already in storage at the Y-12 Plant.

FORM OR-658B (REV. 4/98)

United States Department of Energy Oak Ridge Operations Office DESCRIPTION OF DECLARED URANIUM SCRAP				DECLARATION NO. SHEET 1 OF 1	
SHIPPING CONT. SERIAL NO.	PRIMARY CONT. I.D. NO.	SCRAP DESCRIPTION	CATEGORY	ATTRACTIVENESS	EXCESS OR NATIONAL SECURITY
		Unirradiated highly enriched uranium fuel assembly scrap produced for the Bulk Shielding Reactor. Scrap includes fuel assemblies, U_3O_8 outer plates and inner plates made of uranium/aluminum alloy and control rods.	III	D	Excess

INSTRUCTIONS: THE DECLARATION NUMBER SHOWN IN THE UPPER RIGHT HAND CORNER OF THIS FORM SHOULD BE THE SAME NUMBER AS THAT SHOWN ON THE CORRESPONDING FORM OR-658C. THE SHIPPING AND PRIMARY CONTAINERS SHOULD BE LISTED IN THE SAME SEQUENCE AS LISTED IN THE CORRESPONDING FORM OR-658C THE SCRAP DESCRIPTION MUST IDENTIFY ALL KNOWN CONSTITUENTS BY NAME AND AMOUNTS PRESENT AND MUST IDENTIFY THE PHYSICAL DIMENSIONS OF ALL ITEMS OTHER THAN POWDERS OR LIQUIDS.

REMARKS
CSMO LOT NO.

FORM OR-658D (REV. 12/96)

United States Department of Energy
Oak Ridge Operations Office

URANIUM SCRAP SHIPPING DATA

1. LOCATION OF SCRAP: Oak Ridge Y-12 Plant RIS: FZF

2. DECLARATION NO. FZG-072

SHEET 1 OF 1

3. SECURITY CLASSIFICATION OF SCRAP
__ UNCLASSIFIED X CLASSIFIED __ __ BY: __ SHAPE __ COMPOSITION,
C S ASSOCIATION WITH

4 SHIPPING CONTAINER DATA (LOADED)

SERIAL NUMBER	TYPE CODE	SECURITY SEAL NO.	GROSS WT. (POUNDS)

5. PRIMARY (INNER) CONTAINER DATA

IDENTIFICATION NUMBER	TYPE CODE	WEIGHT (GRAMS) GROSS	TARE	NET
				18,486

6. SCRAP CODE, SNM CONTENT, & GENERATING PROJECT

ANSI CODE	GRAMS URANIUM	WT. % U-235	GRAMS U-235	PROJECT NUMBER
	15,829	93	14,751	KC000050B

CONTAINERS	TOTAL	WEIGHT
CONTAINERS	TOTAL	NET WT. 18,486

	TOTAL U 15,829	AVERAGE 93.18	TOTAL U-235 14,751	

SHIPPING CONTAINER TYPE	CODE
DOT-6L (55-GAL)	A
DOT-6L (110-GAL)	B
DOT-6M (55-GAL)	C
DOT-6M (110-GAL)	D
DOT-SP (SPECIFY IN BLOCK 7)	E
OTHER (SPECIFY IN BLOCK 7)	F

PRIMARY CONTAINER TYPE	CODE
1-QT PLASTIC BOTTLE	1
2-QT PLASTIC BOTTLE	2
PLASTIC BAG OR WRAPPING	3
# 2 SEALED METAL CAN	4
# 3 OR LARGER SIZED METAL CAN	5
OTHER (SPECIFY IN BLOCK 7)	6

7. REMARKS
Material is in storage at the Y-12 Plant.

CSMO LOT NO.

FORM OR-658C (REV. 12/96)

N N-RCRA CERTIFICATION S. ATEMENT

"We certify according to process knowledge or through analytical determination that the content of the containers in Scrap Declaration FZG-072 does not contain Resource Conservation and Recovery Act (RCRA) Hazardous Waste as identified in 40 CFR 261.3."

Generator Signature: Roger S. Stowers

Company Name: Lockheed Martin Energy Rearch Corporation, ORNL

Date: 1/25/99

FORM OR-658E (REV. 4/98)

RUN DATE: 98/08/19 Jun/Jul '98 DATA PAGE: 1

ITEM	MTC1	TFSR	TRAN	PRJP	LINP	NETF	ANAL	ELEM	ASSY	ISOT
0200-00-0150	1941	87-87	BI	FKC0000S0B	290	4	.000000	4	93.15	3
0200-00-0183	1941	87-87	BI	FKC0000S0B	290	4	.000000	4	93.15	3
0FZC-02-0881	1941	87-87	BI	FKC0000S0B	291	151	.000000	151	93.16	140
0FZC-04-0881	1941	87-87	BI	FKC0000S0B	291	152	.000000	151	93.16	141
0FZC-09-0881	1941	87-87	BI	FKC0000S0B	291	152	.000000	151	93.16	141
0FZC-10-0881	1941	87-87	BI	FKC0000S0B	291	151	.000000	151	93.16	141
0FZG-02-0019	1941	87-87	BI	FKC0000S0B	291	214	.000000	214	92.99	199
0R00-00-0063	1941	87-87	BI	FKC0000S0B	291	181	.000000	181	93.16	169
0R00-00-0114	1941	87-87	BI	FKC0000S0B	291	162	.000000	162	93.21	151
0R00-00-0ST1	1941	87-87	BI	FKC0000S0B	291	248	.000000	248	93.15	231
0R00-00-0ST5	1941	87-87	BI	FKC0000S0B	291	268	.000000	268	93.28	250
0R40-00-9SSD	1941	87-87	BI	FKC0000S0B	291	158	.000000	158	93.67	148
0SNM-00-2010	1925	87-87	BI	FKC0000S0B	771	1	.000000	1	93.16	1
5088-11-YZPF	1941	87-87	BI	FKC0000S0B	291	860	.000000	860	93.16	802
5088-13-YZPG	1941	87-87	BI	FKC0000S0B	291	862	.000000	862	93.16	803
5088-19-YZPH	1941	87-87	BI	FKC0000S0B	291	581	.000000	581	93.16	542
5088-25-YZPI	1941	87-87	BI	FKC0000S0B	291	866	.000000	866	93.16	807
5088-30-YZPJ	1941	87-87	BI	FKC0000S0B	291	861	.000000	861	93.15	802
5088-33-YZPK	1941	87-87	BI	FKC0000S0B	291	430	.000000	430	93.16	400
5088-34-YZPL	1941	87-87	BI	FKC0000S0B	291	860	.000000	860	93.26	802
5088-36-YZPM	1941	87-87	BI	FKC0000S0B	291	580	.000000	580	93.10	540
5088-39-YZPN	1941	87-87	BI	FKC0000S0B	291	860	.000000	860	93.16	802
5088-40-YZPO	1941	87-87	BI	FKC0000S0B	291	860	.000000	860	93.16	801
5088-42-YZPP	1941	87-87	BI	FKC0000S0B	291	862	.000000	862	93.27	804
5088-44-YZPA	1141	87-87	BI	FKC0000S0B	291	12	.000000	12	19.50	1
5088-44-YZPQ	1941	87-87	BI	FKC0000S0B	291	203	.000000	203	93.16	189
5088-44-YZPR	1941	87-87	BI	FKC0000S0B	291	646	.000000	646	93.16	602
FCWB-34-8303	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.18	201
FCWB-34-8304	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.18	201
FCWB-34-8305	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.20	201
FCWB-34-8306	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.20	200
FCWB-34-8307	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.19	201
FCWB-34-8308	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.18	201
FCWB-34-8309	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.22	201
FCWB-34-8310	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.18	201
FCWB-34-8311	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.18	201
FCWB-34-8312	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.17	201
FCWB-34-8313	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.20	201
FCWB-34-8314	1941	87-87	BI	FKC0000S0B	291	216	.000000	216	93.16	201
FCWB-34-8315	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.21	200
FCWB-34-8316	1941	87-87	BI	FKC0000S0B	291	215	.000000	215	93.17	200
FZC9-48-0004	1941	76-76	BI	FKC0000S0B	291	531	.000000	531	93.21	495
FZC9-48-B205	1941	87-87	BI	FKC0000S0B	291	151	.000000	151	92.72	140
FZC9-48-BSF5	1941	87-87	BI	FKC0000S0B	291	118	.000000	118	93.17	110
FZC9-48-BSF6	1941	87-87	BI	FKC0000S0B	291	118	.000000	118	93.17	110
FZC9-48-0005	1941	87-87	BI	FKC0000S0B	291	2649	.000000	192	93.18	180
FZC9-49-L139	1941	87-87	BI	FKC0000S0B	291	102	.000000	102	93.20	95
FZC9-49-L140	1941	87-87	BI	FKC0000S0B	291	104	.000000	104	93.20	97
FZC9-49-L141	1941	87-87	BI	FKC0000S0B	291	103	.000000	103	93.20	96
FZC9-49-L142	1941	87-87	BI	FKC0000S0B	291	103	.000000	103	93.20	96

This document reviewed and deemed UNCLASSIFIED by LC Adaline
8/19/98 Date RCN Initials

*** U N C L A S S I F I E D ***

*** U N C L A S S I F I E D ***

RUN DATE: 98/08/19 Jun/Jul '98 DATA PAGE: 2

ITEM	MTCl	TFSR	TRAN	PRJF	LINP	NETP	ANAL	ELEM	ASSY	ISOT
VZC9-49-L143	1941	87-87	SI	FRC0000502	291	103	.000000	103	93.20	95

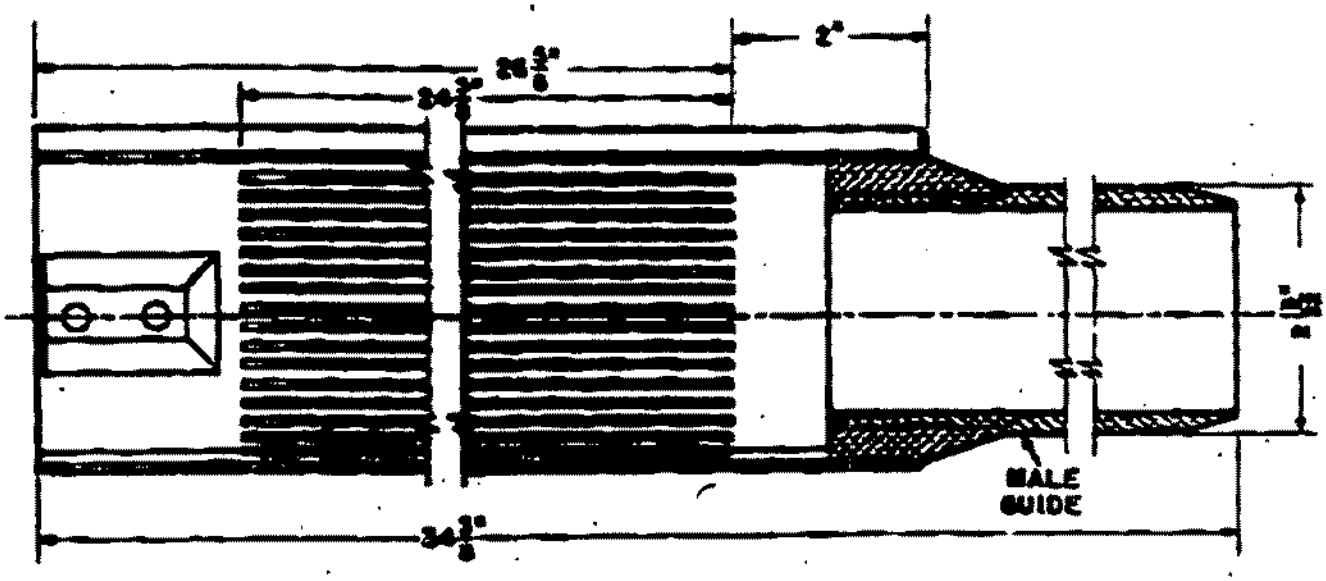
TOTALS FOR 51 ITEMS IN 51 RECORDS:
NETF: 18486
ELEM: 15829
ISOT: 14751

*** THIS IS THE LAST PAGE OF THIS REPORT ***

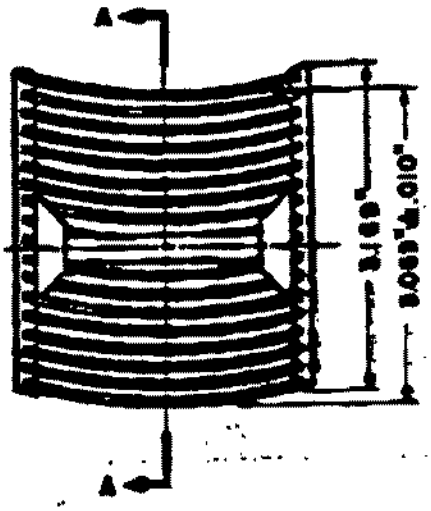
BSR

03:345-A

Light-water-moderated Reactor: Type II. Heterogeneous—Enriched Fuel



SECTION A-A OF FUEL ELEMENT ASSEMBLY



Group 24 : 17 of 32 items Associated with BSR.

Bulk Shielding Reactor (BSR-I)

Name of Installation

June, 1958

Date of Information

GENERAL

1. Reactor Location	Oak Ridge National Laboratory, Oak Ridge, Tennessee
2. Owned by	U.S. Atomic Energy Commission
3. Operated by	Union Carbide Nuclear Co.
4. Reactor Type	Heterogeneous, water moderated, above 90% enriched U^{235}, swimming pool type
5. Designed by	Oak Ridge National Laboratory
6. Construction by	Oak Ridge National Laboratory
7. Cost of Reactor Facility	Approx $500,000
8. Operating Staff	Two per shift
9. Annual Operating Cost	
10. Status:	
a. Date First Critical	December 17, 1950
b. Date Full Power	February 16, 1951
c. Date in Routine Operation	

GENERAL – continued

11. Design Power	100 kw
12. Normal Operating Power	1 to 10^6 w
13. Normal Power Density	About 10 kw/liter max for 5 x 6 loading, H_2O reflector
14. Normal Specific Power	275 kw/kg (max)
15. Operating Schedule	Variable
16. Principal Use of Reactor	Research
17. To Whom Available for Research?	Principally ORNL – others by special arrangement

FUEL

1. Normal Fresh Fuel Loading	3830 gm U^{235}
2. Total Fuel Inventory	Varies
3. Expected Average Burnup Before Reprocessing	Approx 1%
4. Fluid Fuel:	
a. Composition	Not applicable
b. Total Volume in Core	
c. Total Volume in System	
d. Stationary or Circulating?	
5. Solid Fuel:	
a. Fuel Element Shape	Parallel plates
b. Fuel Alloy or Composition	U-Al alloy, 90% enriched U^{235}
c. Fuel Dimensions	24 x 2 x 0.020 in.
d. Cladding Thickness	20 mils
e. Cladding Material	Aluminum
f. Type of Subassembly	Stacked plates (MTR type)
g. Number of Elements per Subassembly	13

Bulk Shielding Reactor (BSR-I)

Name of Installation

FUEL - continued

5. Solid Fuel (cont'd)	
h. Subassembly Dimensions	3-1/8 x 3 x 34-1/2 in.
i. Normal Number of Subassemblies in Core	30
j. Normal Arrangement of Subassemblies	A parallelpiped approx 15 x 18 x 24 in.
k. Normal Lifetime of Standard Subassembly	3 to 5 years
6. Method of Refueling	Long handled tool

REACTOR

1. Over-All Active Core Dimensions	15 x 18 x 24 in., typical
2. Core-Containing Vessel:	Pool:
a. Over-All Dimensions	20 x 40 x 27 ft
b. Material	Concrete
c. Mean Operating Pressure	17 ft H_2O
d. Mean Operating Temperature	Approx 122F
3. Moderator	Demineralized water
4. Reflector	Demineralized water
5. Thermal Shield	Demineralized water
6. Biological Shield	Demineralized water
7. Reactor Control	The nuclear detectors employed are 3 safety (total) chambers, 2 compensated (neutron) chambers, and 1 U^{235} fission chamber; 3 (26 in. long, 2-1/2 in. x 7/8 in. oval cross sections) Al-clad B_4C shim safety rods suspended from electromagnets; regulating rod is an open stainless steel shell (same dimensions) with 0.087 in. wall; each rod positioned by motor actuated worm-geared drive assembly (See Remarks)

PRIMARY COOLANT

1. Fluid	Demineralized water
2. Circulation:	
a. Direction of Flow	Upward
b. Flow Induced by	Natural circulation
c. Normal Flow Rate	
d. Mean Velocity Through Core	
e. Inlet Temperature	
f. Temperature Rise	66.6F
3. Heat Dissipation Method	Natural circulation plus small heat exchanger
4. Average Core Heat Flux	9×10^3 Btu/ft^{2}hr of fuel plate surface
5. Ratio of Maximum to Average Heat Flux	
6. Means of Purification	Water is circulated through a 10 gpm mixed-bed ion-exchange column and a 200 gpm close-weave cotton filter

NUCLEAR DATA

1. Fuel Loading:	
a. Minimum Critical Mass	2419 gm BeO (3 in.) reflected on sides, 4 x 5 element array 2 safety rods and 1 RR and 1 corner missing
b. Normal Fresh Fuel Loading	3829 gm H_2O reflected, 5 x 6 element array 2 safety rods and 1 regulating rod
c. Excess k, Fresh Loading	2-1/2% $\Delta k/k$ (max)
2. Fluxes:	
a. Average Thermal Flux	
b. Peak Thermal Flux	1×10^{13} n/cm^2 sec
c. Average Fast Flux	
d. Peak Fast Flux	3×10^{13} n/cm^2 sec
3. Reactivity Coefficients:	
a. Temperature	8×10^{-5} $\frac{\Delta k}{k}$/C (20C - 60C)
b. Void	
4. Burnable Poisons:	None
a. Type	
b. Amount	
c. Purpose	

Bulk Shielding Reactor (BSR-I)

Name of Installation

RESEARCH FACILITIES

Irradiation Space (Beam Tube, Thermal Column, Rabbit, Open Pool, etc.)	Description and Dimensions	Access (Manual, Crane, Conveyor, etc.)	Temperature	Neutron Flux Values Fast n/cm² sec	Neutron Flux Values Thermal n/cm² sec	Gamma Flux r/hr
Open water	20 x 27 x 40 ft	Crane		3×10^{13}	1×10^{13}	7×10^{7}
Thermal column	9 x 9 in. opening	Through water		5×10^{3}/100 kw	7×10^{6}/100 kw	

REMARKS

Fast scrams are initiated by:
(a) Period of less than 1 sec
(b) 150% max power level
(c) Loss of the "Σ" (safety) buss.

Slow scrams are initiated by:
(a) Manually operated wall scram buttons located at various points in the building
(b) Console scram button
(c) A high radiation level at either of the two reactor bridge monitrons.

Reverse (corrective shim insertions):
(a) Periods of less than 7 sec
(b) Level (safety) chamber currents greater than a preset demand, but less than scram valves
(c) Interlocks in the log power channel that will not let the power greatly exceed the servo demand level
(d) Two abnormalities in the safety channels
(e) Servo operation with the regulating rod in its lower limit (fully inserted).

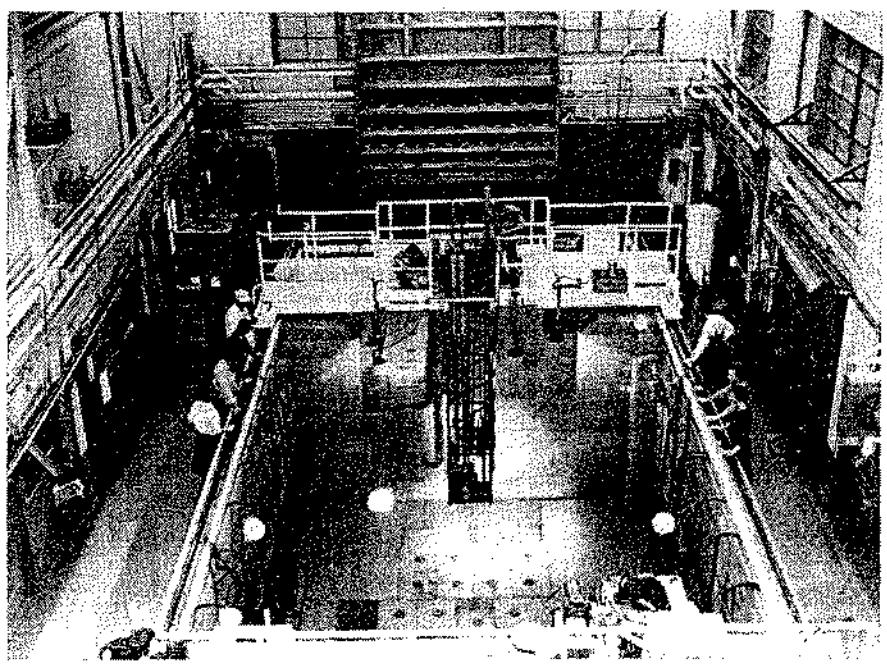
Inhibits (shim withdrawal interlocks):
(a) Lack of confidence in the startup information
(b) Periods of less than 20 sec.

Operation (by operator choice):
(a) Manual startup – manual level control
(b) Manual startup – servo level control
(c) Fully automatic startup and level control.

BIBLIOGRAPHY

"A Bibliography of ORNL – BSF Reports Pertinent to Swimming Pool Type Reactor Design", F. C. Maienschein, E. B. Johnson, ORNL-2036.

DIAGRAM OF REACTOR FACILITY



CNEA RA-2 (Argentina)

SHIPMENT SUMMARY FOR SCRAP DECLARATION NUMBER: CNEA-2005-001
(ENTER SCRAP DEC. NO.)

SHIPPER SITE: CNEA Argentina **DATE:** _____

SHIPPING CONTAINER INFORMATION											INNER CONTAINER INFORMATION		
Drum Type	Drum Serial/ID No.	Drum TID No.	Loaded Drum Weight (lbs)	Radiation Level Outside Drum at Contact	Radiation Level Outside Drum at 1 ft	Drum CSI	Drum TI	Drum H:X Ratio	Drum Total U-235 (g)	Radioactive Label Category (I, II,III)	Inner Container Type	Inner Container Serial/ID No.	Inner Contair TID No.
TNBGC-1	6										TN-90		N/A
TNBGC-1	11										TN-90		N/A
TNBGC-1	43										TN-90		N/A
TNBGC-1	59										TN-90		N/A
TNBGC-1	74										TN-90		N/A
TNBGC-1	87										TN-90		N/A
TNBGC-1	95										TN-90		N/A
TNBGC-1	120										TN-90		N/A
TNBGC-1	126										TN-90		N/A
Tool Box	6					N/A	N/A	N/A	N/A		N/A	N/A	N/A
Tool Box	9					N/A	N/A	N/A	N/A		N/A	N/A	N/A

Shipment Summary Attachment Rev 1.xls
Form date: 5/31/05

NATIONAL SECURITY INFORMATION
Classified By: A. B. Tapp, 5/31/05
Derived: Y/CG-990, Rev 1, Y-12, 2/01
Declassify: X2

	SHIPMENT SUMMARY FOR SCRAP DECLARATION NUMBER:								CNEA-2005-001
	MATERIAL DESCRIPTION								
Drum Serial/ID No.	Drum TID No.	Material Item ID No.	Material Type	Material Description	Grams Uranium	Grams U-235	Weight % U-235	Net Weight of Material (g)	ATT Level	Comments
6		Stacks # 1 and # 2	HEU	HEU-AL/AL Fuel Plates					D	
11		Stacks # 3 and # 4	HEU	HEU-AL/AL Fuel Plates					D	
43		Stacks # 5 and # 6	HEU	HEU-AL/AL Fuel Plates					D	
59		Stacks # 7 and # 8	HEU	HEU-AL/AL Fuel Plates					D	
74		Stacks # 9 and # 10	HEU	HEU-AL/AL Fuel Plates					D	
87		Stacks # 11 and # 12	HEU	HEU-AL/AL Fuel Plates					D	
95		Stacks # 13 and # 14	HEU	HEU-AL/AL Fuel Plates					D	
120		Stacks # 15 and # 16	HEU	HEU-AL/AL Fuel Plates					D	
126		Stacks # 17 and # 18	HEU	HEU-AL/AL Fuel Plates					D	
6		N/A	N/A	Tools	N/A	N/A	N/A	N/A	N/A	
9		N/A	N/A	Tools	N/A	N/A	N/A	N/A	N/A	

DECLARATION REQUEST

1. DECLARATION REQUEST for URANIUM: [X] SCRAP [ ] STORAGE 2. DECLARATION NUMBER: CNEA-2005-0001

SECTION I (Items 1-6) - FOR USE BY GENERATOR

INSTRUCTIONS

(1) A scrap or storage declaration package is comprised of completed Forms OR-658A through OR-658G. Please identify if this declaration is submitted as "scrap" or "storage" by placing an "X" in the appropriate box for Item 1.

(2) Please assign a Declaration Number to this package. A Declaration Number is generally comprised of the generator's three letter RIS followed by a dash and four numerical digits for the calendar year the declaration is submitted in, followed by another dash and a three digit number to identify the chronological/sequential numbering for declarations submitted by this RIS for the calendar year (e.g., FZF-2004-001). The Declaration Number assigned in Item 2 of this form should be carried forward to forms OR-658B through OR-658G.

(3) A declaration should be comprised of materials that are of the same material form and constituents.

(4) It is imperative that a complete and concise description of both the material and packaging be furnished with each declaration request. Forms OR-658B through OR-658G must be utilized for this purpose. If material requires repackaging prior to shipment, please provide as much packaging information as possible based on the packaging plan for this material. Indicate on Forms OR-658C-1 and OR-658D-1 if the packaging information provided is actual or proposed.

(5) If material is not available for immediate delivery to a reprocessor, provide a detailed explanation on a separate sheet and attach to this request form

(6) After all forms have been completed, forward the original package to the shipper's DOE/NNSA Field Office and send copy to the attention of the Central Scrap Management Office, Y-12 National Security Complex, PO Box 2009, Oak Ridge TN 37831-8236.

3. GENERATOR NAME: Comision Nacional De Energia Atomica

GENERATOR ADDRESS: Deposito Central de Material Fisionable Especial, San Martin, Provincia de Buenos Aires, Argentina

Generator Site Representative hereby certifies that the material covered by this request will be in conformance with all applicable regulations.

4. DATE:	5. PRINTED NAME: Oscar E. Novara TITLE: RA-2 Project Manager PHONE NUMBER: 54 11 6772-7825 E-MAIL ADDRESS: novara@cnea.gov.ar	6. SIGNATURE: TFC. All FOR OSCAR NOVARA TRENT C. ANDES FINAL REVISION TO BE SIGNED BY GENERATOR AT TIME OF LOADING.

SECTION II (Items 7-9) - FOR CONCURRENCE BY COGNIZANT DOE/NNSA FIELD OFFICE

(Forward signed form to the Y-12 National Security Complex.)

7. DATE:	8. DOE/NNSA FIELD OFFICE NAME:	9. SIGNATURE:

SECTION III (Items 10-16) - FOR USE BY THE CENTRAL SCRAP MANAGEMENT OFFICE (CSMO)

10. RESPONSE:

The uranium scrap listed in Scrap Declaration CNEA-2005-001 should be shipped to the Oak Ridge Y-12 Plant for storage, processing, and reuse. Please contact Arlene Tapp at (865) 576-4518 for authorization to ship. Material Control and Accountability (MC&A) conditions should be documented and coordinated through the Y-12 MC&A organization [Contact Connie Hall at (865) 241-9044]. A copy of the 741 document should be provided to Becky Eddy, NNSA-YAO. Y-12 should receive this material in Project No. FNN4001090.

Concurrence of Section III by the Y-12 National Security Complex

11. DATE: 6/08/05	12. Y-12 National Security Complex CSMO Manager Patricia B. Helms	13. SIGNATURE: Pat Helms

Concurrence of Section III by the NNSA Y-12 Site Office

14. DATE: 6/10/05	15. NNSA-YSO CSMO Manager Becky G. Eddy	16. SIGNATURE:

Form OR-658A (Rev 3/04)

DECLARATION DESCRIPTION **Declaration Number:** _____

MATERIAL

General Description of Material: (including type of material, physical and chemical form, description of matrix for mixtures, amount, etc.)

The CNEA RA-2 fuel consists of the following: 438 plates containing Uranium in the U-Al alloy form clad in Aluminum. The Uranium is enriched to approximately 90% in the U-235 isotope. The majority of the plates are approximately 65.5 cm (length) x 7.1 cm (width) x 0.13 cm (thickness) and are slightly curved. The overall weight of the plates is about 170 g (of which Aluminum accounts for 162 g). Details of the plates are provided in the Attachments.

History of Material: (including original purpose of the material and detailed historical information concerning processing, handling and storage of the material that may have caused contamination or adulteration of the material.)

Most of the plates were utilized in the RA-2 Critical Assembly located in Constituyentes Atomic Center (CAC). The plates were originally arranged in the form of material test reactor elements which formed the RA-2 core. The critical assembly operated from 1966 until 1983 at very low power (0.1 watt) and short durations (~20 hr/week). The plates have been in dry storage at the CAC since RA-2 defueling in the mid-1980's. The dose rates from the plates are low and do not require any special shielding in the storage facility. Dose rates from the individual plates (at contact) are 0.58 mrem/hr on average with a maximum of 0.92 mrem/hr. The plates are intact (no exposed fuel meat) and free of surface contamination.

PACKAGING

General Description of Packaging (Inner to Outer)

Example:	
Packaging that is in direct contact with material:	*Material (foil) in* **1-liter polybottle**
Next level of packaging:	*Polybottle in* **plastic bag**
Next level of packaging:	*Plastic bag in* **paint can**
Next level of packaging:	*Paint can in* **stainless steel 5-gallon can**
Next level of packaging:	N/A
Next level of packaging:	N/A
Next level of packaging:	N/A
Shipping Container:	*5-gallon can in* **stainless steel 55-gallon drum with vermiculite**

For This Declaration:	
Packaging that is in direct contact with material:	~25 plates to be wrapped with fiberglass tape or metal bandings
Next level of packaging:	TN-90 Inner Container (containing ~50 plates)
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Next level of packaging:	
Shipping Container:	TN-BGC1

SHIPMENT

RIS location of material to be shipped from: _____

Name of Shipping Site Representative: _____

Shipping Site Rep Phone Number: _____

Shipping Method (commercial or government): _____

Form OR-658B (Rev 3/04)

INNER (PRIMARY) CONTAINER DATA - Part 1 **Declaration Number:** ____________

The inner (primary) container is a stand-alone container that houses the material item(s). The inner (primary) container can be removed from the shipping container and must have an NMC&A approved TID attached. The inner (primary) container may be a stainless steel paint can, crimp-sealed can, specifically designed container, etc. The inner (primary) container may also house additional convenience packaging such as single or multiple polybottles, plastic bags, etc. that contain the actual material item(s). The gross, tare, and net weights will be established for the inner (primary) container. The inner (primary) container is not the same as the inner containment vessel (e.g., 2R).

Is packaging information you are providing in the table below based on actual or proposed packaging?	____	Actual packaging that meets or exceeds shipping requirements	____	Proposed packaging that meets or exceeds shipping requirements
	____	Approximate date (mo/yr) material was packaged	Jun-05	Approximate date (mo/yr) material will be packaged

Inner (Primary) Container Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (If applicable)	NMC&A Approved TID Number	Inner (Primary) Container Type (e.g., paint can, crimp-sealed can, etc.)	Inner (Primary) Container Size (e.g., 1-gallon, 2-liter, etc.)	Inner (Primary) Container Construction Material (e.g., stainless steel, etc.)	Type of Lid Closure on Inner (Primary) Container (e.g., screw-cap, paint lid, pressed, crimped, etc.)	Outer Diameter of Inner (Primary) Container (inches)	Overall Height of Inner (Primary) Container (inches)	Packing Material Within Inner (Primary) Container (If applicable)
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD
TBD			TN-90		Stainless Steel	Bolted	5.83 closure lid; 4.88 OD body; 4.72 ID body	57.8; 55 (useable)	steel wool or TBD

		Total number of inner (primary) containers on this page of Form OR-658D-1
		Grand Total number of inner (primary) containers on Form OR-658D-1 (all pages)

Page __ of __ Pages
Form OR-658D-1 (Rev 3/04)

IRRADIATION QUESTIONNAIRE AND CONCURRENCE STATEMENT

Declaration Number: _____

Is the material listed in this declaration irradiated?	___Yes _X_ No *

If the material is not irradiated and has no known contaminants, please sign below as a confirmation.

* Although exposed in the critical assembly, the plates are defined as unirradiated per SRNL-MTS-2004-30016 (attached).

I concur that the material described in this declaration is not irradiated and has no known contaminants resulting in discrete quantities of fission products or transuranic elements.

Shipping Site Representative **Printed Name:** _____

Shipping Site Representative **Signature:** _____

Date: _____

If the material is irradiated or slightly irradiated, please complete the following questions.

When was the material **first** irradiated or made critical or subcritical? 1966

How long did the material remain in this condition? 17 yrs

When was it **last** irradiated or made critical or subcritical? 1983

How long did the material remain in this condition? 22 yrs

What was the neutron flux to which the material in question was subjected? 5x10E+7

For how long? intermittent operation (approximately 20 hrs per week over 17 yrs at 0.1 watt)

For **metals**, what is the removable, alpha surface activity in dpm/100 cm^2 for each item:

a. attributed to transuranics (e.g., neptunium, plutonium, americium) _____

b. attributed to uranium _____

What is the alpha activity in curies per gram or multiples thereof for each alpha-emitting radionuclide? (Uranium alpha activity may be combined to yield a total uranium value with the exception of U-232 and U-233. Values for U-232 or U-233 should be included separately.)

What is the beta activity in curies per gram or multiples thereof for each beta emitting radionuclide? (Uranium daughter beta activity may be combined to yield a total uranium value.)

What is the gamma activity in curies per gram or multiples thereof for each gamma emitting radionuclide?

< 5.4E-18 Ci Pu; < 6E-4 Ci fission products; < 1.5E-5 g U-236

What is the source of information/documentation for compiling your responses to the questions on this form?

historical facility records reported in DOE App. A No. 1 and No. 2 and SRNL-MTS-2004-30016 (all attached)

I concur that the information provided above regarding irradiated or slightly irradiated material is correct.

Shipping Site Representative **Printed Name:** _____

Shipping Site Representative **Signature:** _____

Date: _____

Form OR-658F (Rev 3/04)

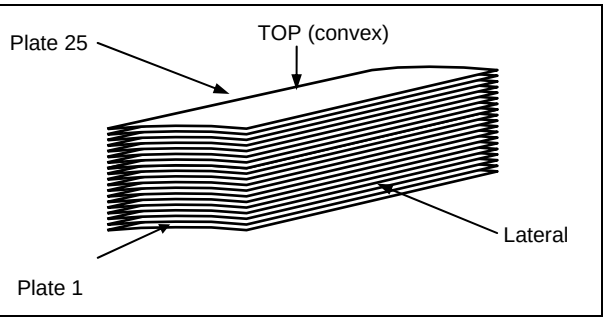
FUEL PLATES STACK Nº 01

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX1	TN - 90	YY1	25	000001	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4493.5	178.57	160.65

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
0.13	0.34	0.34



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	82X	177,04	5,69	5,12	89,98	0,009	0,009	0,2
2	86X	177,5	5,68	5,11	89,96	0,021	0,021	0,2
3	79X	176,88	5,71	5,14	90,02	0,033	0,033	0,2
4	88X	177,23	5,71	5,14	90,02	0,025	0,025	0,3
5	77X	177,02	5,70	5,13	90,00	0,013	0,013	0,3
6	76X	175,56	5,67	5,10	89,95	0,013	0,013	0,3
7	341	184,24	8,69	7,82	89,99	0,020	0,020	15,0
8	147	186,19	8,57	7,71	89,96	0,033	0,033	15,1
9	218	185,47	8,97	8,05	89,74	0,015	0,015	15,0
10	269	181,46	8,98	8,08	89,98	0,040	0,040	17,1
11	285	185,30	8,85	7,96	89,94	0,020	0,020	17,1
12	108	186,35	8,53	7,68	90,04	0,020	0,020	17,2
13	170	177,38	8,69	7,82	89,99	0,040	0,040	17,2
14	302	184,88	8,65	7,78	89,94	0,070	0,070	17,0
15	186	187,82	9,01	8,11	90,01	0,035	0,035	17,1
16	252	181,27	8,70	7,83	90,00	0,050	0,050	16,1
17	234	184,81	8,37	7,53	89,96	0,010	0,010	15,3
18	202	184,54	8,62	7,76	90,02	0,056	0,056	13,9
19	83X	176,78	5,58	5,02	89,96	0,016	0,016	0,3
20	71X	175,68	5,69	5,11	89,81	0,024	0,024	0,2
21	74X	175,01	5,75	5,17	89,91	0,016	0,016	0,2
22	80X	176,69	5,72	5,14	89,86	0,010	0,010	0,2
23	78X	176,98	5,74	5,17	90,07	0,017	0,017	0,2
24	81X	176,17	5,74	5,17	90,07	0,020	0,020	0,2
25	84X	176,25	5,56	5,00	89,93	0,012	0,012	0,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

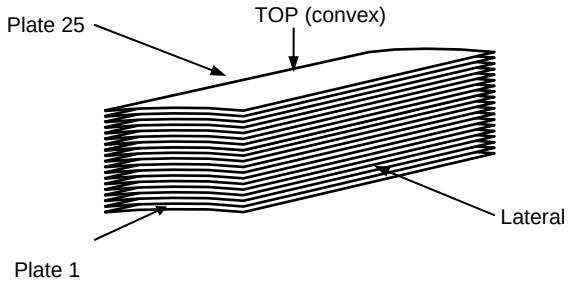
FUEL PLATES STACK Nº 02

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX3	TN - 90	YY3	25	000002	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4487.9	202.09	181.69

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
0	0.43	0.43



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	72X	175,77	5,70	5,12	89,82	0,012	0,012	0,3
2	89X	176,66	5,70	5,12	89,82	0,011	0,011	0,3
3	13X	178,01	7,80	7,02	90,00	0,024	0,024	0,3
4	84	185,53	8,37	7,53	89,96	0,009	0,009	6,5
5	1237	179,89	8,60	7,72	89,77	0,011	0,011	7,4
6	1366	180,09	8,45	7,59	89,82	0,005	0,005	7,8
7	1024	178,54	8,58	7,70	89,74	0,012	0,012	9,0
8	117	186,37	8,51	7,66	90,01	0,011	0,011	10,7
9	118	186,16	8,72	7,85	90,02	0,008	0,008	11,7
10	57	186,04	8,50	7,65	89,96	0,013	0,013	12,2
11	74	186,98	8,75	7,87	89,94	0,040	0,040	13,1
12	148	185,95	8,60	7,74	90,00	0,068	0,068	13,1
13	91	186,37	8,96	8,06	89,96	0,006	0,006	14,1
14	321	184,47	8,41	7,57	90,01	0,030	0,030	12,9
15	1025	175,50	8,67	7,78	89,73	0,016	0,016	12,6
16	517	180,19	8,51	7,65	89,89	0,011	0,011	12,0
17	22	184,10	8,46	7,61	89,95	0,022	0,022	11,1
18	41	185,70	8,63	7,77	90,03	0,012	0,012	9,0
19	1028	179,25	8,63	7,74	89,69	0,024	0,024	8,1
20	1315	181,20	8,89	7,99	89,88	0,005	0,005	7,5
21	1313	180,90	8,67	7,79	89,85	0,024	0,024	7,2
22	1212	180,53	8,86	7,96	89,84	0,008	0,008	7,0
23	14X	177,63	7,77	6,99	89,96	0,017	0,017	0,3
24	73X	175,39	5,69	5,12	89,98	0,013	0,013	0,3
25	87X	177,64	5,66	5,10	89,93	0,009	0,009	0,3

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

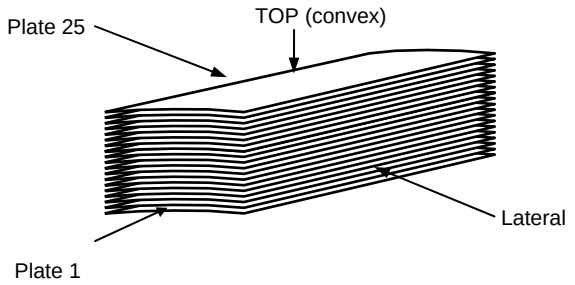
FUEL PLATES STACK Nº 03

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX5	TN - 90	YY5	25	000003	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4398.8	212.13	190.70

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
1.5	0.65	0.65



FUEL PLATES CHECKLIST

MATERIAL DESCRIPTION: U-Al alloy plate / Al clad. Item 8X is a J-type plate.

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	8X	115,99	4,82	4,33	89,91	0,002	0,002	0,2
2	158	185,97	8,89	8,00	89,99	0,033	0,033	5,7
3	393	181,38	8,99	8,07	89,77	0,030	0,030	6,1
4	356	184,06	8,30	7,47	90,00	0,019	0,019	6,3
5	395	180,14	9,07	8,14	89,75	0,027	0,027	6,9
6	366	185,80	8,38	7,54	89,98	0,019	0,019	8,0
7	485	179,55	8,59	7,72	89,87	0,047	0,047	8,9
8	487	177,77	8,59	7,72	89,87	0,030	0,030	9,1
9	509	182,91	8,61	7,74	89,90	0,040	0,040	9,1
10	710	180,64	8,52	7,64	89,72	0,045	0,045	10,1
11	488	178,36	8,60	7,73	89,88	0,015	0,015	11,2
12	507	182,71	8,53	7,67	89,92	0,032	0,032	11,1
13	508	183,03	8,67	7,79	89,85	0,030	0,030	11,2
14	513	181,11	8,83	7,94	89,92	0,044	0,044	11,2
15	506	171,66	8,69	7,81	89,87	0,040	0,040	10,1
16	511	181,10	8,67	7,79	89,85	0,040	0,040	10,2
17	512	181,07	8,73	7,85	89,92	0,013	0,013	10,2
18	478	179,07	8,59	7,72	89,87	0,030	0,030	10,1
19	482	179,59	8,85	7,95	89,83	0,055	0,055	9,1
20	372	184,97	8,72	7,85	90,02	0,005	0,005	8,3
21	151	183,96	8,93	8,04	90,03	0,027	0,027	6,9
22	164	186,93	8,96	8,06	89,96	0,031	0,031	6,6
23	354	183,64	8,27	7,44	89,96	0,029	0,029	6,0
24	301	184,98	8,61	7,75	90,01	0,027	0,027	5,2
25	26X	177,84	7,72	6,90	89,90	0,011	0,011	0,3

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

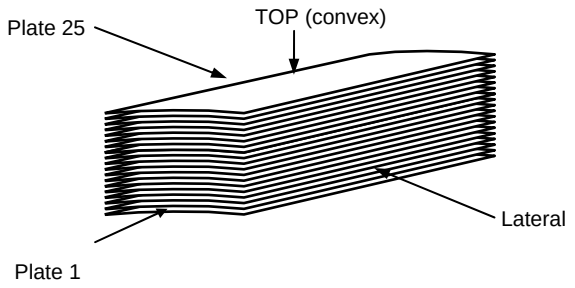
FUEL PLATES STACK Nº 04

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX5	TN - 90	YY6	25	000004	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4586.4	213.51	192.12

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.2	0.55	0.55



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	450	174,67	8,73	7,85	89,92	0,023	0,023	5,9
2	1	184,89	8,66	7,79	89,95	0,011	0,011	7,0
3	344	185,60	8,42	7,58	90,03	0,000	0,000	7,1
4	312	184,73	8,64	7,78	90,05	0,030	0,030	7,4
5	358	186,03	8,38	7,54	89,98	0,013	0,013	7,6
6	157	185,96	8,95	8,05	89,94	0,027	0,027	7,6
7	2	185,06	8,70	7,83	90,00	0,012	0,012	7,9
8	355	184,20	8,34	7,51	90,05	0,009	0,009	7,9
9	346	186,05	8,94	8,05	90,01	0,019	0,019	8,2
10	329	184,76	8,33	7,50	90,04	0,032	0,032	8,7
11	347	186,12	8,78	7,9	89,93	0,018	0,018	8,7
12	349	186,34	8,39	7,55	89,97	0,020	0,020	10,8
13	348	185,83	8,43	7,59	90,00	0,040	0,040	11,3
14	350	185,05	8,51	7,65	89,95	0,015	0,015	8,4
15	352	184,61	8,40	7,56	90,04	0,028	0,028	8,2
16	345	185,37	8,30	7,47	90,03	0,031	0,031	7,9
17	150	184,92	8,69	7,82	89,99	0,065	0,065	7,8
18	360	186,12	8,49	7,64	89,99	0,022	0,022	7,8
19	339	184,65	8,42	7,58	90,02	0,009	0,009	7,8
20	324	185,24	8,52	7,67	90,02	0,010	0,010	7,4
21	365	186,16	8,30	7,47	90,00	0,006	0,006	7,5
22	520	181,28	8,52	7,66	89,91	0,022	0,022	7,2
23	357	185,23	8,29	7,46	89,99	0,025	0,025	6,9
24	623	183,54	8,45	7,58	89,70	0,007	0,007	6,7
25	165	185,09	8,93	8,00	90,03	0,003	0,003	6,5

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

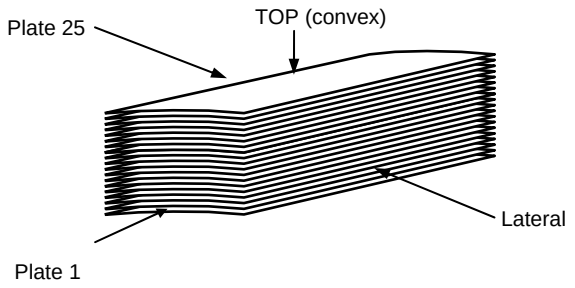
FUEL PLATES STACK Nº 05

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX6	TN - 90	YY6	25	000005	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4554.6	214.53	192.72

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.5	0.48	0.48



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	633	183,14	8,32	7,47	89,78	0,004	0,004	6,5
2	640	183,89	8,64	7,75	89,73	0,012	0,012	6,8
3	739	184,25	8,59	7,71	89,73	0,013	0,013	7,1
4	353	185,84	8,40	7,56	90,04	0,021	0,021	7,2
5	751	184,19	8,61	7,73	89,75	0,007	0,007	7,2
6	797	184,70	8,50	7,63	89,73	0,013	0,013	7,6
7	810	184,94	8,39	7,54	89,83	0,012	0,012	7,6
8	244	181,15	8,43	7,59	90,04	0,011	0,011	7,7
9	872	182,44	8,41	7,55	89,73	0,023	0,023	8,1
10	842	180,99	8,88	7,97	89,73	0,004	0,004	8,3
11	469	178,71	8,55	7,70	90,03	0,019	0,019	8,7
12	9	185,33	8,72	7,85	90,02	0,022	0,022	14,5
13	436	177,91	8,39	7,54	89,87	0,006	0,006	15,6
14	145	187,31	8,71	7,84	90,01	0,012	0,012	16,6
15	1029	175,59	8,69	7,80	89,76	0,016	0,016	8,6
16	892	182,62	8,56	7,68	89,73	0,011	0,011	8,0
17	1209	179,74	8,63	7,75	89,80	0,022	0,022	7,9
18	397	179,31	8,95	8,03	89,73	0,021	0,021	7,8
19	799	184,60	8,45	7,58	89,73	0,018	0,018	7,6
20	792	184,30	8,41	7,55	89,73	0,012	0,012	7,3
21	788	184,87	8,93	8,01	89,73	0,018	0,018	7,2
22	670	184,02	8,50	7,64	89,91	0,012	0,012	6,9
23	371	184,78	8,65	7,78	89,91	0,019	0,019	7,0
24	593	183,73	8,76	7,86	89,73	0,009	0,009	7,0
25	359	185,71	8,46	7,60	89,96	0,007	0,007	6,7

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

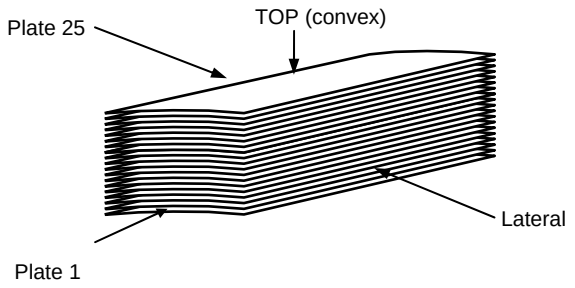
FUEL PLATES STACK Nº 06

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX7	TN - 90	YY7	25	000006	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4379.4	207.24	186.41

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.5	0.59	0.59



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad. Items 6X and 7X are J-type plates.

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	23X	176,96	7,79	7,01	89,99	0,015	0,015	0,2
2	7x	115,28	4,64	4,17	89,81	0,019	0,019	2,1
3	6x	113,28	4,63	4,16	89,89	0,018	0,018	2,3
4	2172	178,24	8,57	7,7	89,84	0,032	0,032	4,0
5	216	185,21	8,61	7,75	90,01	0,005	0,005	8,1
6	232	185,25	8,30	7,50	90,36	0,025	0,025	7,9
7	69	186,81	8,31	7,48	90,01	0,050	0,050	9,1
8	93	185,98	8,84	7,96	90,02	0,018	0,018	9,0
9	166	183,53	8,85	7,96	89,94	0,029	0,029	9,0
10	39	186,66	8,74	7,87	90,05	0,045	0,045	10,2
11	200	185,37	8,45	7,60	89,94	0,010	0,010	10,8
12	144	178,36	8,70	7,83	90,00	0,020	0,020	11,0
13	8	185,00	8,44	7,60	90,05	0,050	0,050	11,8
14	160	181,47	8,86	7,97	89,95	0,005	0,005	10,9
15	249	181,21	8,94	8,05	90,04	-0,008	-0,008	10,1
16	235	180,80	8,38	7,54	89,98	0,050	0,050	9,0
17	250	185,57	8,81	7,93	90,01	0,010	0,010	9,0
18	419	181,00	8,99	8,07	89,77	0,000	0,000	9,0
19	1023	178,54	8,43	7,56	89,68	0,024	0,024	8,4
20	319	184,40	8,40	7,56	90,00	0,000	0,000	8,0
21	1810	171,28	8,66	7,78	89,84	0,039	0,039	4,0
22	1804	176,39	8,99	8,08	89,84	0,007	0,007	3,9
23	2098	175,53	8,77	7,88	89,84	0,034	0,034	4,0
24	1080	175,59	8,28	7,43	89,73	0,018	0,018	0,7
25	3135	178,9	8,86	8,00	89,95	0,014	0,014	0,5

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

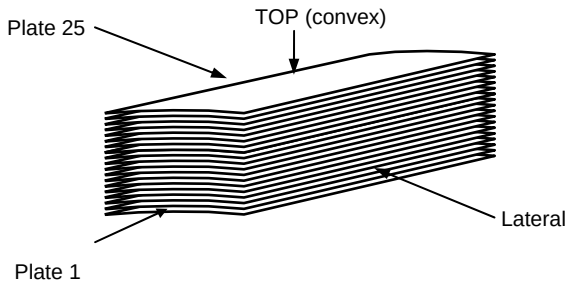
FUEL PLATES STACK Nº 07

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX4	TN - 90	YY4	25	000007	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4521.4	217.87	195.90

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
1.6	0.48	0.48



FUEL PLATES CHECKLIST

MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	1669	178,15	8,52	7,66	89,95	0,046	0,046	4,2
2	2175	178,72	8,90	8,00	89,84	0,004	0,004	4,2
3	2095	174,63	8,68	7,80	89,84	0,029	0,029	4,3
4	2171	178,48	8,94	8,03	89,84	0,042	0,042	4,4
5	1705	181,17	8,89	7,99	89,84	0,003	0,003	4,5
6	1752	175,17	8,33	7,48	89,84	0,029	0,029	4,5
7	95	186,13	8,70	7,83	90,00	0,012	0,012	9,7
8	44	186,11	8,82	7,92	89,80	0,010	0,010	10,2
9	60	186,51	8,87	7,98	89,97	0,020	0,020	10,2
10	78	186,17	9,01	8,09	89,79	0,031	0,031	10,6
11	205	186,52	8,81	7,93	90,01	0,009	0,009	10,6
12	111	186,17	8,68	7,81	89,98	0,040	0,040	10,6
13	122	186,32	8,30	7,47	90,00	0,015	0,015	11,1
14	26	184,56	8,90	8,01	90,00	0,009	0,009	11,2
15	238	186,35	8,86	7,97	89,95	0,010	0,010	11,1
16	189	185,66	8,93	8,04	90,03	0,012	0,012	10,6
17	173	181,95	8,98	8,08	89,98	0,005	0,005	10,2
18	221	180,76	8,42	7,58	90,02	0,010	0,010	10,2
19	1823	175,90	8,79	7,90	89,84	0,048	0,048	4,8
20	2576	177,24	8,50	7,64	89,91	0,029	0,029	4,5
21	1706	180,76	8,75	7,86	89,84	0,003	0,003	4,5
22	1737	174,83	8,47	7,62	89,93	0,039	0,039	4,4
23	2577	177,54	8,53	7,67	89,91	0,032	0,032	4,3
24	2173	178,80	8,99	8,08	89,84	0,007	0,007	4,2
25	2176	178,63	8,30	7,50	89,84	0,039	0,039	4,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

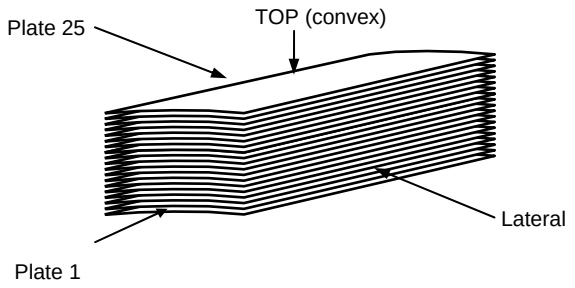
FUEL PLATES STACK Nº 08

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX6	TN - 90	YY6	25	000008	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4475.6	217.68	195.67

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
4.5	0.38	0.38



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	1527	178,68	8,31	7,47	89,85	0,005	0,005	3,2
2	1542	175,84	8,40	7,55	89,84	0,037	0,037	3,3
3	1607	177,15	8,63	7,75	89,84	0,041	0,041	3,3
4	1627	178,14	8,79	7,90	89,85	0,029	0,029	3,4
5	1659	179,61	8,94	8,03	89,84	0,041	0,041	3,3
6	1661	178,66	9,19	8,26	89,84	0,040	0,040	3,5
7	1520	168,68	8,56	7,69	89,85	0,030	0,030	3,5
8	1663	178,49	8,66	7,78	89,85	0,012	0,012	3,7
9	1533	177,18	8,56	7,69	89,85	0,015	0,015	4,1
10	288	185,34	8,52	7,67	90,03	0,004	0,004	11,1
11	3	181,78	8,77	7,89	89,97	0,015	0,015	11,6
12	121	184,64	8,42	7,58	90,02	0,026	0,026	11,6
13	325	184,66	8,58	7,72	89,98	0,014	0,014	12,1
14	272	181,47	8,86	7,97	89,95	0,013	0,013	11,5
15	305	183,61	8,72	7,85	90,02	0,007	0,007	11,6
16	255	185,46	8,40	7,56	90,00	0,007	0,007	11,1
17	1668	178,50	9,05	8,13	89,85	0,004	0,004	3,8
18	1666	178,75	8,87	7,97	89,85	0,030	0,030	3,8
19	1662	178,25	8,65	7,77	89,85	0,022	0,022	3,6
20	1660	179,72	9,00	8,09	89,84	0,002	0,002	3,3
21	1618	178,07	8,72	7,83	89,84	0,028	0,028	3,4
22	1657	179,49	8,87	7,97	89,84	0,032	0,032	3,3
23	1655	179,13	8,58	7,71	89,84	0,029	0,029	3,3
24	1720	177,96	8,98	8,07	89,84	0,039	0,039	3,1
25	1609	177,17	8,65	7,77	89,84	0,007	0,007	3,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

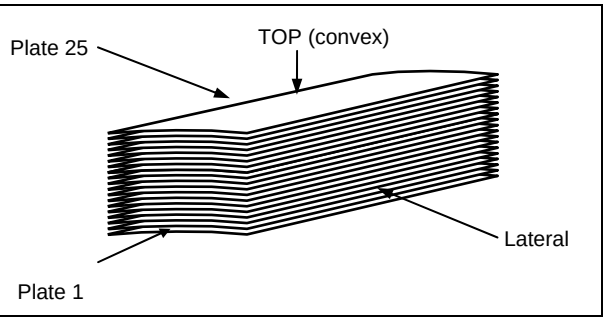
FUEL PLATES STACK Nº 09

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX3	TN - 90	YY4	25	000009	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{236}
	4470.8	219.56	197.41

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
4.3	0.46	0.46



FUEL PLATES CHECKLIST

MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	1900	175,33	8,73	7,84	89,84	0,038	0,038	3,1
2	2507	178,00	8,93	8,03	89,90	0,003	0,003	3,2
3	2019	177,61	8,40	7,55	89,84	0,007	0,007	3,3
4	2514	178,50	9,02	8,11	89,90	0,039	0,039	3,3
5	2563	178,66	8,91	8,01	89,94	0,007	0,007	3,4
6	1605	177,18	8,46	7,60	89,84	0,038	0,038	3,4
7	2566	178,99	8,92	8,02	89,94	0,012	0,012	3,5
8	2579	177,81	8,56	7,70	89,91	0,038	0,038	3,6
9	2589	178,00	8,66	7,79	89,91	0,007	0,007	3,8
10	2622	176,71	8,94	8,04	89,95	0,039	0,039	3,9
11	299	184,54	8,68	7,81	89,98	0,014	0,014	16,8
12	168	187,12	8,92	8,03	90,02	0,013	0,013	17,0
13	163	184,08	8,96	8,06	89,96	0,032	0,032	18,8
14	267	186,06	8,76	7,88	89,96	0,011	0,011	16,9
15	38	187,45	8,52	7,67	89,98	0,018	0,018	16,0
16	2426	170,04	9,03	8,12	89,89	0,013	0,013	3,9
17	2587	178,25	8,63	7,76	89,91	0,051	0,051	3,8
18	2529	177,45	8,66	7,78	89,85	0,028	0,028	3,6
19	2578	177,45	8,54	7,68	89,91	0,051	0,051	3,6
20	1942	176,30	8,86	7,96	89,84	0,037	0,037	3,6
21	2515	178,45	8,97	8,06	89,90	0,007	0,007	3,4
22	2545	178,22	8,83	7,94	89,88	0,029	0,029	3,3
23	2511	178,11	8,92	8,02	89,90	0,031	0,031	3,2
24	2533	176,53	8,78	7,89	89,85	0,003	0,003	3,3
25	2512	178	8,97	8,10	89,90	0,059	0,059	3,3

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

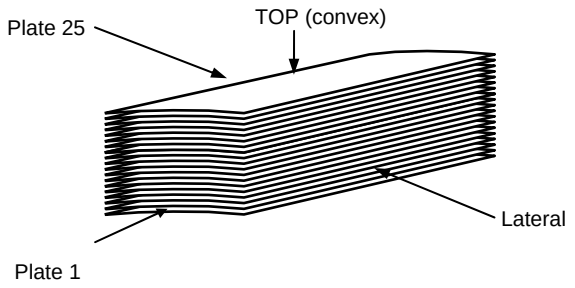
FUEL PLATES STACK Nº 10

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX2	TN - 90	YY2	25	000010	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4480.0	215.50	193.90

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
4.2	0.43	0.43



FUEL PLATES CHECKLIST

MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	3276	176,23	8,44	7,59	89,93	0,029	0,029	2,5
2	3314	176,75	8,81	7,93	90,01	0,023	0,023	2,9
3	3309	177,08	8,42	7,57	89,90	0,024	0,024	3,1
4	3316	176,94	8,63	7,77	90,00	0,013	0,013	3,1
5	3305	177,29	8,81	7,93	90,01	0,025	0,025	3,3
6	3300	176,81	8,68	7,81	89,98	0,029	0,029	3,6
7	3301	178,01	8,97	8,07	89,97	0,028	0,028	3,6
8	404	179,54	8,32	7,47	89,78	0,010	0,010	11,1
9	204	186,02	8,86	7,97	89,95	0,014	0,014	12,9
10	72	185,83	8,55	7,69	89,94	0,017	0,017	15,1
11	89	185,92	8,63	7,77	90,03	0,025	0,025	14,9
12	106	185,76	8,45	7,60	89,94	0,030	0,030	15,0
13	338	184,55	8,58	7,72	89,98	0,041	0,041	15,4
14	19	184,70	8,50	7,65	90,00	0,022	0,022	15,5
15	143	181,47	8,70	7,83	90,00	0,043	0,043	14,9
16	55	185,90	8,37	7,53	89,96	0,015	0,015	13,8
17	440	179,03	8,72	7,84	89,91	0,014	0,014	11,2
18	3307	177,87	8,96	8,06	89,96	0,016	0,016	3,7
19	3302	178,04	8,95	8,06	90,06	0,008	0,008	3,5
20	3311	176,19	8,31	7,48	90,01	0,017	0,017	3,3
21	3313	176,17	8,38	7,54	89,98	0,007	0,007	3,3
22	3306	177,69	8,80	7,92	90,00	0,007	0,007	3,2
23	3310	176,64	8,46	7,62	90,07	0,012	0,012	3,1
24	3304	177,56	8,95	8,06	90,06	0,042	0,042	3,0
25	3312	176,32	8,25	7,40	89,94	0,029	0,029	2,9

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

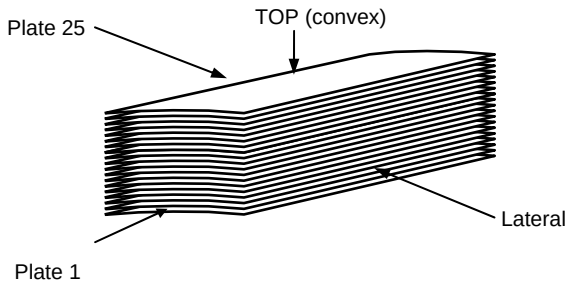
FUEL PLATES STACK Nº 11

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX1	TN - 90	YY1	25	000011	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4478.5	217.24	195.29

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
4.3	0.44	0.44



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2990	173,9	8,78	7,90	89,98	0,012	0,012	2,8
2	2978	178,51	8,91	8,01	89,90	0,031	0,031	3,3
3	2969	177,74	8,83	7,94	89,92	0,016	0,016	3,4
4	3278	176,15	8,52	7,77	91,20	0,045	0,045	3,8
5	3298	176,48	8,66	7,79	89,95	0,020	0,020	4,0
6	557	181,63	8,46	7,60	89,83	0,035	0,035	6,9
7	611	182,79	8,68	7,79	89,75	0,024	0,024	7,6
8	382	181,12	8,54	7,66	89,70	0,014	0,014	7,6
9	333	184,85	8,56	7,70	89,95	0,012	0,012	7,9
10	374	181,40	8,65	7,76	89,71	0,009	0,009	12,7
11	387	181,31	8,55	7,67	89,71	0,011	0,011	13,6
12	380	181,50	8,55	7,67	89,71	0,012	0,012	14,5
13	439	178,77	8,33	7,49	89,92	0,036	0,036	16,6
14	377	181,16	8,97	8,05	89,74	0,041	0,041	15,5
15	378	182,70	9,05	8,12	89,72	0,013	0,013	15,1
16	385	180,63	8,43	7,56	89,68	0,009	0,009	13,6
17	418	180,79	8,91	7,99	89,67	0,034	0,034	12,2
18	523	181,10	8,82	7,92	89,80	0,007	0,007	7,4
19	521	180,74	8,58	7,71	89,86	0,017	0,017	7,3
20	555	181,71	8,45	7,59	89,82	0,006	0,006	6,9
21	3299	176,67	8,81	7,93	90,01	0,025	0,025	3,8
22	3303	178,02	8,88	7,99	89,98	0,012	0,012	3,7
23	2977	178,57	8,64	7,77	89,93	0,034	0,034	3,4
24	2979	178,36	8,87	7,98	89,97	0,024	0,024	3,2
25	2980	178,01	8,81	7,90	90,01	0,028	0,028	3,1

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

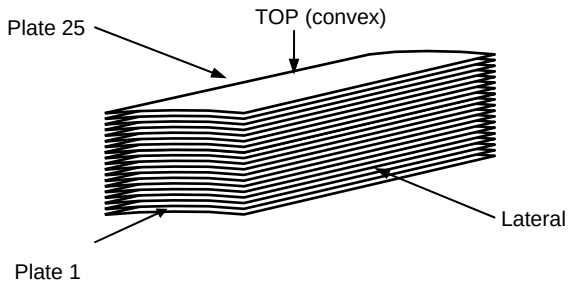
FUEL PLATES STACK Nº 12

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX7	TN - 90	YY7	25	000012	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4516.9	219.79	197.72

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.8	0.53	0.53



FUEL PLATES CHECKLIST

MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2967	177,77	8,72	7,84	89,91	0,008	0,008	3,4
2	2975	178,17	9,01	8,11	90,01	0,049	0,049	3,6
3	2961	180,30	8,72	7,85	90,02	0,008	0,008	3,6
4	2964	178,76	8,88	7,99	89,98	0,020	0,020	3,7
5	2962	179,02	8,92	8,02	89,91	0,031	0,031	3,7
6	2968	177,17	8,90	8,01	90,00	0,017	0,017	3,8
7	101	183,86	8,56	7,70	89,95	0,009	0,009	7,2
8	66	187,66	8,98	8,08	89,98	0,007	0,007	7,6
9	1208	179,91	8,72	7,82	89,68	0,011	0,011	7,8
10	231	186,41	8,84	7,96	90,05	0,020	0,020	10,2
11	40	185,85	8,45	7,6	89,94	0,014	0,014	14,6
12	56	186,75	8,74	7,87	90,05	0,008	0,008	15,6
13	73	185,77	8,83	7,95	90,03	0,014	0,014	16,4
14	21	182,55	8,53	7,68	90,04	0,007	0,007	15,6
15	167	181,33	8,95	8,05	89,94	0,015	0,015	10,1
16	199	180,46	8,35	7,51	89,94	0,002	0,002	10,1
17	266	186,33	8,79	7,91	89,99	0,039	0,039	9,6
18	278	181,57	8,68	7,81	89,98	0,006	0,006	7,6
19	262	186,07	8,64	7,78	90,05	0,008	0,008	7,4
20	396	180,49	9,06	8,13	89,74	0,005	0,005	6,6
21	2965	178,64	8,89	8,00	89,99	0,040	0,040	3,7
22	2974	178,64	8,99	8,09	89,99	0,030	0,030	3,6
23	2971	178,77	8,93	8,03	89,92	0,020	0,020	3,6
24	2966	177,56	8,66	7,79	89,95	0,027	0,027	3,6
25	2970	176,96	9,05	8,10	89,94	0,030	0,030	3,6

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

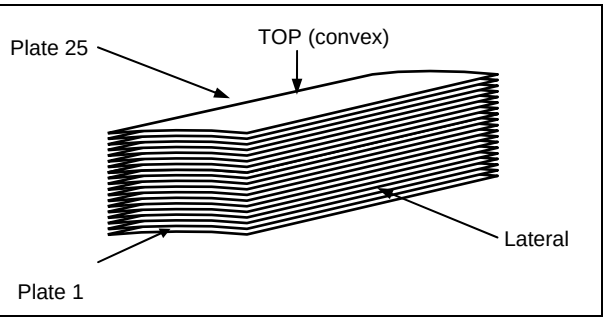
FUEL PLATES STACK Nº 13

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX8	TN - 90	YY8	25	000013	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4516.1	215.63	194.01

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.7	0.46	0.46



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2865	173,86	8,64	7,77	89,93	0,006	0,006	2,9
2	2875	176,52	8,88	7,99	89,98	0,049	0,049	3,0
3	2877	176,05	8,84	7,96	90,05	0,048	0,048	3,1
4	2880	175,75	9,01	8,10	89,90	0,057	0,057	3,1
5	2891	175,73	8,79	7,91	89,99	0,031	0,031	3,7
6	71	185,21	8,42	7,58	90,02	0,017	0,017	7,8
7	282	186,31	8,56	7,70	89,95	0,040	0,040	8,6
8	88	186,41	8,57	7,71	89,96	0,010	0,010	10,6
9	183	182,74	8,87	7,98	89,97	0,007	0,007	10,6
10	248	185,98	8,76	7,88	89,95	0,042	0,042	10,7
11	142	185,81	8,60	7,74	90,00	0,013	0,013	11,2
12	141	181,32	8,47	7,62	89,96	0,007	0,007	12,5
13	18	185,91	8,38	7,54	90,00	0,014	0,014	12,7
14	54	185,58	8,40	7,56	90,00	0,025	0,025	12,2
15	37	186,35	8,39	7,54	89,91	0,012	0,012	12,0
16	105	184,11	8,44	7,60	90,05	0,013	0,013	10,6
17	318	184,27	8,33	7,50	90,04	0,010	0,010	10,6
18	215	186,27	8,67	7,80	89,97	0,020	0,020	10,2
19	298	184,75	8,61	7,75	90,01	0,007	0,007	8,7
20	337	184,14	8,44	7,60	90,05	0,030	0,030	7,6
21	2889	176,19	8,67	7,80	89,97	0,006	0,006	3,8
22	2878	175,85	8,87	7,98	89,97	0,049	0,049	3,0
23	2876	176,19	8,90	8,00	89,89	0,051	0,051	3,0
24	2884	175,25	8,45	7,60	89,94	0,012	0,012	2,9
25	2886	175,99	8,67	7,80	89,97	0,022	0,022	3,0

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

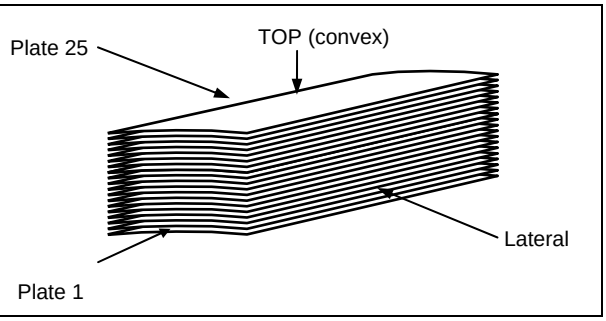
FUEL PLATES STACK Nº 14

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX9	TN - 90	YY9	25	000014	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4516.5	215.26	193.68

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
2.4	0.68	0.68



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2888	176,41	8,59	7,73	89,99	0,029	0,029	3,2
2	2887	176,36	8,53	7,67	89,92	0,028	0,028	3,2
3	2879	175,94	9,00	8,10	90,00	0,007	0,007	3,3
4	2900	175,38	8,44	7,59	89,93	0,013	0,013	3,4
5	281	182,25	8,50	7,65	90,00	0,024	0,024	10,7
6	214	185,22	8,48	7,63	89,98	0,014	0,014	10,5
7	230	186,50	8,58	7,72	89,99	0,020	0,020	10,7
8	182	186,97	8,89	8,00	89,99	0,021	0,021	11,0
9	104	183,73	8,45	7,60	89,94	0,035	0,035	11,1
10	17	184,34	8,52	7,67	90,04	0,019	0,019	11,6
11	317	185,78	8,56	7,70	89,91	0,045	0,045	12,4
12	336	184,90	8,58	7,72	89,98	0,023	0,023	12,6
13	515	180,40	8,81	7,92	89,90	0,014	0,014	15,1
14	139	186,72	8,59	7,73	89,99	0,031	0,031	14,5
15	297	184,14	8,50	7,65	90,00	0,035	0,035	12,1
16	120	186,50	9,00	8,10	90,00	0,017	0,017	11,5
17	53	183,91	8,45	7,60	89,94	0,021	0,021	11,0
18	35	185,22	8,38	7,54	89,94	0,029	0,029	11,1
19	265	184,73	8,70	7,83	90,00	0,009	0,009	11,2
20	70	186,32	8,31	7,50	90,25	0,027	0,027	10,6
21	2892	175,87	8,62	7,75	89,91	0,006	0,006	3,7
22	2890	176,43	8,73	7,85	89,92	0,005	0,005	3,7
23	2883	176,54	8,46	7,61	89,95	0,010	0,010	3,3
24	2881	174,97	8,93	8,03	89,92	0,025	0,025	3,2
25	2885	175,15	8,66	7,79	89,95	0,041	0,041	3,3

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

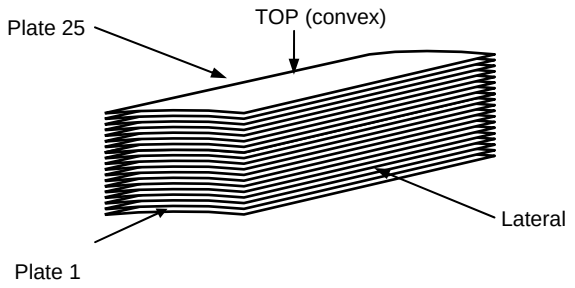
FUEL PLATES STACK Nº 15

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX4	TN - 90	YY4	25	000015	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4469.6	216.03	194.40

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
4.3	0.53	0.53



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2953	176,16	8,58	7,72	89,95	0,003	0,003	3,6
2	2689	175,84	8,82	7,93	89,91	0,049	0,049	3,8
3	2671	175,41	8,80	7,91	89,93	0,032	0,032	3,8
4	2672	175,42	8,55	7,69	89,91	0,006	0,006	3,9
5	2777	175,86	8,58	7,72	89,96	0,004	0,004	3,8
6	2779	175,83	8,69	7,82	89,96	0,008	0,008	3,8
7	2762	174,10	8,68	7,80	89,91	0,039	0,039	4,0
8	2874	176,74	8,83	7,94	89,95	0,005	0,005	4,0
9	247	185,86	8,70	7,83	90,00	0,016	0,016	9,8
10	140	184,58	8,71	7,84	90,01	0,024	0,024	10,5
11	273	181,13	8,82	7,94	90,02	0,017	0,017	14,1
12	124	186,80	8,51	7,66	90,01	0,029	0,029	14,5
13	5	184,64	8,28	7,49	90,46	0,029	0,029	14,5
14	326	184,66	8,64	7,78	90,05	0,033	0,033	14,1
15	198	185,58	8,41	7,57	90,01	0,017	0,017	10,6
16	87	185,74	8,54	7,69	90,05	0,021	0,021	10,0
17	2629	175,35	8,82	7,93	89,95	0,006	0,006	4,1
18	2882	176,84	8,49	7,64	89,95	0,003	0,003	4,0
19	2903	177,35	8,39	7,55	89,94	0,004	0,004	4,0
20	2963	177,48	8,99	8,09	89,95	0,017	0,017	3,9
21	2678	175,89	8,63	7,76	89,91	0,033	0,033	3,8
22	2698	177,56	8,67	7,80	89,95	0,004	0,004	3,8
23	2705	177,02	8,76	7,88	89,95	0,032	0,032	3,8
24	2652	175,82	8,55	7,69	89,93	0,007	0,007	3,8
25	2743	177,05	8,59	7,73	89,95	0,029	0,029	3,7

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

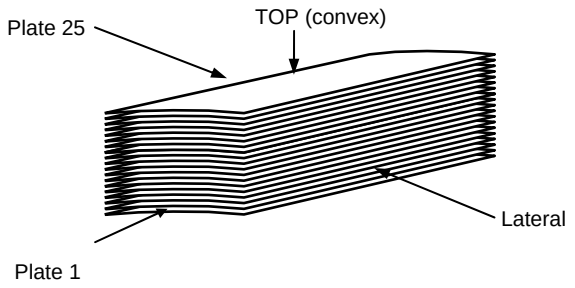
FUEL PLATES STACK Nº 16

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX9	TN - 90	YY9	25	000016	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4580.8	216.16	194.53

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
1.3	0.65	0.65



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	3610	177,6	8,80	7,92	90,03	0,005	0,005	4,2
2	97	185,61	8,32	7,49	90,02	0,009	0,009	8,4
3	240	183,86	8,29	7,46	89,99	0,008	0,008	8,5
4	46	185,57	8,46	7,61	89,95	0,003	0,003	8,8
5	223	181,32	8,50	7,65	90,00	0,012	0,012	9,0
6	112	186,24	8,74	7,87	90,05	0,007	0,007	12,4
7	222	181,24	8,46	7,61	89,95	0,008	0,008	12,7
8	79	185,60	8,42	7,58	90,02	0,027	0,027	12,6
9	206	185,75	8,79	7,91	89,99	0,016	0,016	13,0
10	256	185,76	8,66	7,79	89,95	0,008	0,008	13,0
11	190	185,43	8,90	8,01	90,00	0,009	0,009	13,0
12	27	184,49	8,87	7,96	89,70	0,007	0,007	13,5
13	61	186,18	8,87	7,98	89,97	0,007	0,007	13,5
14	174	177,89	8,83	7,95	90,03	0,009	0,009	13,5
15	123	186,66	8,36	7,52	89,95	0,042	0,042	13,0
16	289	185,65	8,91	8,02	90,01	0,008	0,008	13,0
17	306	184,55	8,77	7,89	89,97	0,012	0,012	12,9
18	96	185,75	8,32	7,49	90,02	0,009	0,009	12,6
19	45	185,75	8,31	7,50	90,25	0,012	0,012	12,5
20	239	186,44	8,86	7,97	89,95	0,014	0,014	12,1
21	207	186,04	8,74	7,87	90,05	0,007	0,007	9,1
22	80	185,94	8,88	7,99	89,98	0,012	0,012	9,0
23	62	185,83	8,40	7,56	90,00	0,017	0,017	8,4
24	126	187,14	8,64	7,78	90,05	0,052	0,052	7,6
25	2847	177,03	9,06	8,15	89,96	0,004	0,004	4,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

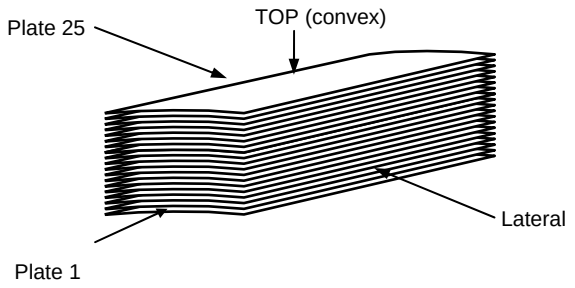
FUEL PLATES STACK Nº 17

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX8	TN - 90	YY9	25	000017	B

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	4583.6	216.94	195.21

RADIOLOGICAL CHARACTERIZATION		
DOSE (on concave surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
1.5	0.80	0.80



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	2951	178,12	9,05	8,14	89,94	0,012	0,012	4,0
2	308	184,07	8,40	7,56	90,00	0,010	0,010	10,7
3	246	186,00	8,53	7,68	90,04	0,008	0,008	10,6
4	113	186,65	8,80	7,92	90,00	0,009	0,009	11,2
5	257	185,72	8,80	7,92	89,97	0,003	0,003	11,1
6	290	185,76	8,76	7,88	89,91	0,004	0,004	11,1
7	86	184,97	8,44	7,60	90,06	0,007	0,007	11,2
8	274	181,60	8,78	7,90	89,98	0,003	0,003	11,8
9	119	186,10	8,92	8,03	90,02	0,007	0,007	11,7
10	229	186,04	8,55	7,69	89,94	0,007	0,007	11,7
11	125	186,65	8,58	7,72	89,98	0,029	0,029	12,1
12	191	185,82	8,94	8,05	90,04	0,013	0,013	12,7
13	28	183,88	8,96	8,03	89,62	0,012	0,012	13,3
14	327	184,88	8,75	7,87	89,95	0,015	0,015	12,2
15	181	182,58	8,92	8,03	90,02	0,007	0,007	11,6
16	213	183,44	8,52	7,67	90,02	0,005	0,005	11,6
17	6	185,16	8,42	7,58	90,02	0,005	0,005	11,6
18	175	181,81	8,83	7,95	90,03	0,013	0,013	11,7
19	103	184,35	8,43	7,59	90,04	0,005	0,005	11,2
20	197	185,51	8,47	7,62	89,96	0,005	0,005	11,2
21	264	186,72	8,72	7,85	90,02	0,013	0,013	11,1
22	316	184,36	8,59	7,73	90,00	0,006	0,006	11,0
23	280	185,61	8,33	7,50	90,04	0,008	0,008	10,7
24	296	184,66	8,37	7,53	89,96	0,005	0,005	10,7
25	2950	178,36	9,08	8,17	89,98	0,021	0,021	4,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

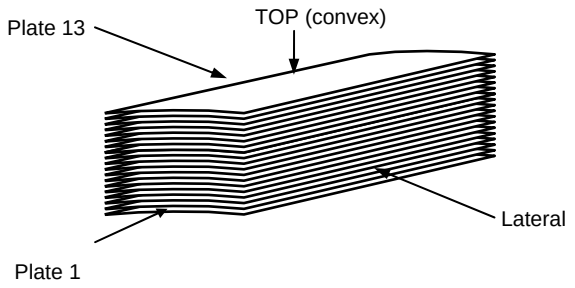
FUEL PLATES STACK Nº 18

DATA SHEET

PACKAGE IDENTIFICATION						
SHIPPING CONTAINER		PRIMARY CONTAINER		STACK		
MODEL	ID#	MODEL	ID#	Nº of plates	ID #	Position (a)
TN- BGC1	XX2	TN - 90	YY2	13	000018	T

WEIGHT DATA			
STACK (g)		URANIUM CONTENT (g)	
GROSS (b)	NET	U TOT	U^{235}
	2034.0	99.82	89.81

RADIOLOGICAL CHARACTERIZATION		
DOSE (on convex surface)		
β in contact (mrad/h)	γ exposure @ 1 foot (mR/h)	Deep dose @ 1 foot (mrem/h)
1.0	0.22	0.22



FUEL PLATES CHECKLIST
MATERIAL DESCRIPTION: U-Al alloy plate / Al clad. Items 1292 and 1224 are miniplates. Item 5364 is a flat plate.

Plate Position	Plate ID Number	Plate Net Weight (fabrication records, g) (c)	Element Uranium (g)	Isotope U^{235} (g)	Weight % U^{235}	γ Exposure (mR/h) at 1 ft (30 cm)	Deep Dose (γ & n) (mrem/hr) at 1 ft (30 cm)	β in contact (mrad/h)
1	3166	177,65	8,48	7,63	89,98	0,013	0,013	0,8
2	3167	177,80	8,56	7,70	89,95	0,012	0,012	0,8
3	407	180,13	8,87	7,96	89,74	0,024	0,024	11,1
4	34	185,96	8,30	7,49	90,24	0,007	0,007	12,1
5	52	182,92	8,44	7,60	90,05	0,005	0,005	12,4
6	68	185,40	8,97	8,07	89,97	0,009	0,009	12,5
7	138	186,85	8,64	7,78	90,05	0,019	0,019	13,2
8	335	182,76	8,55	7,69	89,94	0,038	0,038	13,1
9	16	184,40	8,59	7,73	89,99	0,005	0,005	12,6
10	137	184,56	8,54	7,69	90,05	0,017	0,017	12,5
11	5364	182,61	11,39	10,25	89,99	0,020	0,020	0,4
12	1292	18,25	1,26	1,13	89,68	0,007	0,007	0,1
13	1224	17,80	1,23	1,09	88,62	0,017	0,017	0,2

(a) T: top ; B: bottom
(b) Metallic bands plus seals included
(c) Except for plates with ID # in grey. These plates were weighted after their edges shortened to get internal plates overall length.

PBF PWR

DECLARATION DESCRIPTION **Declaration Number: ID-06-05**

MATERIAL

General Description of Material: (including type of material, physical and chemical form, description of matrix for mixtures, amount, etc.)

PBF PWR fuel test rod is a circular cylinder, nominally 39.9" x .422". Fuel rods consist of concentric cylinders of UO2 fuel pellets, contained in a helium filled zirconium alloy tube. The fuel pellets were fabricated by ceramic processes (compaction and sintering) using ceramic grade uranium dioxide powder, with ceramic grade sintered alumina insulating end spacer. There are four (4) intact PBF test fuel rods and twelve (12) individual pellets standards. The nominal dimensions are as follows:
Test Fuel Rods:
Total Length: 39.9 inches
Shape: Rod
Cross-sectional dimensions (diameter): .422 inches OD (range .419 to .425)
Length of fueled portion: 36 inch fuel pellet stack
No. of fuel pellets per rod: 59
Cladding Type: RA-2 Zirconium Alloy
Thickness of cladding: .024 inches (range .022 - .026)
Fuel Composition: UO2
Enrichment: 2 rods at 93% ~ 547 g U / 510 g U-235; 2 rods at 35% ~ 550 g U / 192 g U-235
Continued on next sheet

History of Material: (including original purpose of the material and detailed historical information concerning processing, handling and storage of the material.)

Power Burst Facility (PBF) Pressurized Water Reactor (PWR) test fuel was provided by Gulf United Nuclear Fuels Corporation (GUNFC) for use in the PBF reactor to obtain data to verify analytical modeling of overpower transients and hypothetical accident conditions. Individual pellets are possibly archive pellets or surplus from lots. The PBF reactor operating until 1985 when it was placed on standby status.

Has this material been **contaminated** with or does it contain quantities of **fission products** or any **transuranic elements** other than those occurring naturally due to radioactive decay (such as: plutonium, neptunium, technetium, cesium, americium, etc.)? **YES** _____ **NO** ___X__
If **YES**, list the contaminant, transuranic, or fission products and the amounts. (Attach a separate table, if needed.)

PACKAGING

General Description of Packaging (Inner to Outer)

Example:

Packaging that is in direct contact with material:	*Material (foil) in* **1-liter polybottle**
Next level of packaging:	*Polybottle in* **plastic bag**
Next level of packaging:	*Plastic bag in* **paint can**
Next level of packaging:	*Paint can in* **stainless steel 5-gallon can**
Next level of packaging:	N/A
Next level of packaging:	N/A
Next level of packaging:	N/A
Shipping Container:	*5-gallon can in* **stainless steel 55-gallon drum with vermiculite**

For This Declaration:

Packaging that is in direct contact with material:	PBF Rod Standards: None 93.15-2: Glass or Plastic Tube 34.87-1, 93.15-1: Glass or Plastic Bottle
Next level of packaging:	93.15-2: Glass or Plastic Tube inside Metal 1-Quart Paint Can 34.87-1, 93.15-1: Glass or Plastic Bottle inside Metal 1-Quart Paint Can
Next level of packaging:	93.15-2, 34.87-1 & 93.15-1 (combined in same paint can): Paint Can in 30-Gallon Drum with Foam
Next level of packaging:	
Next level of packaging:	

Shipping Container:	PBF Rod Standards combined (all 4) in 110-gallon DOT 6M (ALL OTHERS): 30-Gallon Drum with Foam in DOT Type A UN1A2 55-Gallon Drum

SHIPMENT

RIS location of material to be shipped from:	JSG
Name of **Shipping Site Representative**:	Max Heberling
Shipping Site Rep Phone Number:	(208) 533-4550
Shipping Method (commercial or government):	Commercial and/or Government

Form OR-658B (Rev 12/04)

Material Data - Part 2

General Description of Material: (including type of material, physical and chemical form, description of matrix for mixtures, amount, etc.)

PBF UO2 Fuel Pellet Information (both test rods and individual pellets):
Total Length: ~ .610 inches (range .600 - .620)
Diameter: ~ .366 inches (range .365 - .367)
Density: 20% (10.23 g/cc); 35% (10.22 g/cc); 93% (10.14 g/cc)
Uranium content (w/o U): 88.0

PBF Ternary Fuel Pellet Information:
Total Length: ~ .62 inches (1.1 inches max. to .56 inches min. - bottom pellets can be shorter to fit design length - maximum of 2 pellets with minimum length of .400 inches)
Diameter: ~ .561 inches
Density: ~ 5.97 g/cc + 0.09
Composition: 30.6 w/o urania; 69.4 w/o zirconia (zirconia contains 10 to 12 w/o calcia)

NOTE: Not positive if the individual pellets are UO2 or ternary so information on both types is being provided.

MATERIAL DATA - Part 1

Declaration Number: ID-06-05

Material data applies to the actual item(s) being shipped.

Material Data - Part 1

Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number	Site Nuclear Material Inventory Assessment (NMIA) ID Number	**Material Description **	COEI/ ANSI Code	Net Weight of Material (grams)	Grams Uranium	Weight % U-235	Grams U-235
TBD*	N/A	B0011	ID17623	SAFEGUARDS PBF PWR ROD STANDARD	771/B60	777.9	550	34.91	192
	N/A	B0019	ID17621	SAFEGUARDS PBF PWR ROD STANDARD	771/B60	778	551	34.85	192
	N/A	C0006	ID16738	SAFEGUARDS PBF PWR ROD STANDARD	771/B60	776.2	547	93.24	510
	N/A	C0008	ID17624	SAFEGUARDS PBF PWR ROD STANDARD	771/B60	774.8	548	93.25	511
TBD*	CAN 2	93.15-2	ID16748	1 PBF STANDARD	771/B60	glass or plastic tube)	9	93.15	9
		34.87-1	ID16733	6 PBF UO2 PELLET STANDARDS	771/B60	120.6 (inside a glass or plastic bottle)	56	33.93	19
		93.15-1	ID16734	5 PBF UO2 PELLETS STANDARDS	771/B60	107.2 (inside a glass or plastic bottle)	46	93.48	43
						Total on this page of Form OR-658E-1	2307		1476
						Grand Total on Form OR-658E-1 (all pages)	2307		1476

** Attach description of composition (lab analysis) if isotopes of uranium other than U-235 (U-232, U-233, U-234, U-236, or U-238) or elements other than uranium are present; e.g., alloyed metal, radionuclides (other than uranium and daughters in secular equilibrium), impurities, etc.; Provide description of matrix for mixtures.**

TBD* Data will be provided once material is packaged for shipment.

MATERIAL DATA - Part 2

Declaration Number: ID-06-05

Material Data - Part 2										
Shipping Container Serial/ID Number (Form OR-658C-1)	Inner (Primary) Container Serial/ID Number (Form OR-658D) (if applicable)	Material Item ID Number (Form OR-658E-1)	Project Number	Excess (E) or National Security (NS)	Category of Material (I, II, III, IV)	Attractiveness (A, B, C, D, E)	Beta Readings @ Contact with Material (mrad/hr)	Gamma Exposure @ 1 foot from Material (mR/hr)	Deep Dose (gamma + neutron @ 1 foot from Material) (mrem/hr)	Irradiated (Y/N)
TBD*	N/A	B0011	JKP1401050	E*	IV	D	1.5	<0.5	<0.5	N*
	N/A	B0019	EGD000000A	E*	IV	D	1.2	<0.5	<0.5	N*
	N/A	C0006	JKP1401050	E*	IV	C	1.5	<0.5	<0.5	N*
	N/A	C0008	EGD000000A	E*	IV	C	1.5	<0.5	<0.5	N*
TBD*	CAN 2	93.15-2	JKP1401050	E*	IV	C	<0.5	<0.5	<0.5	N*
		34.87-1	J-KP-1401-050	E*	IV	D	<0.5 **	<0.5 **	<0.5 **	N*
		93.15-1	J-KP-1401-050	E*	IV	C	<0.5 **	<0.5 **	<0.5 **	N*

TBD* Data will be provided once material is packaged for shipment.
E* Items are identified as part of the 1994 Surplus Fissile Material Baseline.
IV* Category is assigned per planned commercial shipments; entire quantity is Category IV; individual items are Category IV.
** Items not removed from can for survey. Values listed are for container readings.
N* Ref. "Measurement Results of PBF Fuel Items" attachment.

IRRADIATION QUESTIONNAIRE AND CONCURRENCE STATEMENT

Declaration Number: ID-06-05

Is the material listed in this declaration irradiated? ___Yes X No

If the material is not irradiated and has no known contaminants, please sign below as a confirmation.

I concur that the material described in this declaration is not irradiated and has no known contaminants resulting in discrete quantities of fission products or transuranic elements.

Shipping Site Representative **Printed Name:** _____

Shipping Site Representative **Signature:** _____

Date: _____

If the material is irradiated or slightly irradiated, please complete the following questions.

When was the material **first** irradiated or made critical or subcritical? _____

How long did the material remain in this condition? _____

When was it **last** irradiated or made critical or subcritical? _____

How long did the material remain in this condition? _____

What was the neutron flux to which the material in question was subjected? _____

For how long? _____

For **metals**, what is the removable, alpha surface activity in dpm/100 cm^2 for each item:

a. attributed to transuranics (e.g., neptunium, plutonium, americium) _____

b. attributed to uranium

What is the alpha activity in curies per gram or multiples thereof for each alpha-emitting radionuclide? (Uranium alpha activity may be combined to yield a total uranium value with the exception of U-232 and U-233. Values for U-232 or U-233 should be included separately.)

_____

What is the beta activity in curies per gram or multiples thereof for each beta emitting radionuclide? (Uranium daughter beta activity may be combined to yield a total uranium value.)

_____

What is the gamma activity in curies per gram or multiples thereof for each gamma emitting radionuclide?

_____

What is the source of information/documentation for compiling your responses to the questions on this form?

_____

I concur that the information provided above regarding irradiated or slightly irradiated material is correct.

Shipping Site Representative **Printed Name:** _____

Shipping Site Representative **Signature:** _____

Date: _____

Form OR-658F (Rev 3/04)

Specification for LEU Derived from HEU

January 9, 2008

Specified Item	Symbol	Units	Limit	Value	Notes	EBC Factor
U-232	U-232	µg/gU	≤	0.00010		
U-234	U-234	µg/gU-235	≤	10,000	1	
U-235	U-235	wt %	=	4.95%	2	
U-236	U-236	µg/gU	≤	250	1	
Tc-99	Tc-99	µg/gU	≤	0.010		
Trans-Uranics (Np, Pu)	TRU	Bq/gU	≤	3.3	3	
Fission Product Gamma	Gamma	MeV Bq/gU	≤	10	4	
Aluminum	Al	µg/gU	≤	150	5	0.0000
Barium	Ba	µg/gU	≤	5	5	0.0000
Beryllium	Be	µg/gU	≤	100	5	0.0000
Bismuth	Bi	µg/gU	≤	3	5	0.0000
Boron	B	µg/gU	≤	EBC	5, 6	1.0000
Cadmium	Cd	µg/gU	≤	EBC	5, 6	0.3172
Calcium	Ca	µg/gU	≤	75	5	0.0002
Carbon	C	µg/gU	≤	100	5	0.0000
Cesium	Cs	µg/gU	≤	EBC	5, 6	0.0031
Chlorine	Cl	µg/gU	≤	100	5	0.0132
Chromium	Cr	µg/gU	≤	100	5	0.0008
Cobalt	Co	µg/gU	≤	80	5	0.0089
Copper	Cu	µg/gU	≤	100	5	0.0008
Dysprosium	Dy	µg/gU	≤	EBC	5, 6	0.0818
Erbium	Er	µg/gU	≤	EBC	5, 6	0.0135
Europium	Eu	µg/gU	≤	EBC	5, 6	0.4250
Fluorine	F	µg/gU	≤	100	5	0.0000
Gadolinium	Gd	µg/gU	≤	EBC	5, 6	4.3991
Hafnium	Hf	µg/gU	≤	EBC	5, 6	0.0083
Iron	Fe	µg/gU	≤	150	5	0.0006
Lead	Pb	µg/gU	≤	40	5	0.0000
Lithium	Li	µg/gU	≤	EBC	5, 6	0.1439
Magnesium	Mg	µg/gU	≤	75	5	0.0000
Manganese	Mn	µg/gU	≤	50	5	0.0034
Mercury	Hg	µg/gU	≤	EBC	5, 6	0.0263
Molybdenum	Mo	µg/gU	≤	200	5	0.0004
Nickel	Ni	µg/gU	≤	80	5	0.0011

Phosphorus	P	µg/gU	≤	100	5	0.0000
Potassium	K	µg/gU	≤	50	5	0.0006
Samarium	Sm	µg/gU	≤	EBC	5, 6	0.5336
Silicon	Si	µg/gU	≤	200	5	0.0000
Silver	Ag	µg/gU	≤	EBC	5, 6	0.0083
Sodium	Na	µg/gU	≤	20	5	0.0003
Strontium	Sr	µg/gU	≤	50	5	0.0002
Tantalum	Ta	µg/gU	≤	200	5	0.0016
Thorium	Th	µg/gU	≤	10	5	0.0004
Tin	Sn	µg/gU	≤	50	5	0.0000
Titanium	Ti	µg/gU	≤	50	5	0.0018
Tungsten	W	µg/gU	≤	100	5	0.0014
Vanadium	V	µg/gU	≤	10	5	0.0014
Zinc	Zn	µg/gU	≤	20	5	0.0002
Zirconium	Zr	µg/gU	≤	50	5	0.0000
Total Measured Impurities	TMI	µg/gU	≤	1,500	7	
Equivalent Boron Content	EBC	µg/gU	≤	4	6	

Notes

1. It is recognized that not all of the HEU supplied under the LEU Inventory requirement can be down-blended to meet these limits for U-234 and U-236. The Contractor should use its best efforts in cross-blending and selection of diluents to meet these limits where possible.

2. The U-235 assay tolerance is ± 0.05%.

3. The TRU activity is the sum of the measured activity for isotopes of elements above uranium in the periodic chart. At a minimum, Np-237, Pu-238, Pu-239, and Pu-240 shall be measured and included in this sum.

4. The gamma energy of Fission products shall be measured as per ASTM specification C1295-98 "Gamma Energy Emission from Fission Products in Uranium Hexafluoride and Uranyl Nitrate Solution", or an equivalent method.

5. Impurities shall be measured to an accuracy of ± 25% via ICP mass spectroscopy or equivalent.

6. Items marked EBC are jointly limited by the 4 µg/gU EBC Limit. The EBC Calculation & factors are defined in ASTM C1233-03, "Standard Practice for Determining Equivalent Boron Contents of Nuclear Materials". The EBC limit is the sum of the concentration of each item marked EBC times its respective EBC factor.

7. The total measured impurities is the sum of the concentrations of all of the named elemental impurities listed, including those marked EBC.

Planned HEU Delivery Schedule

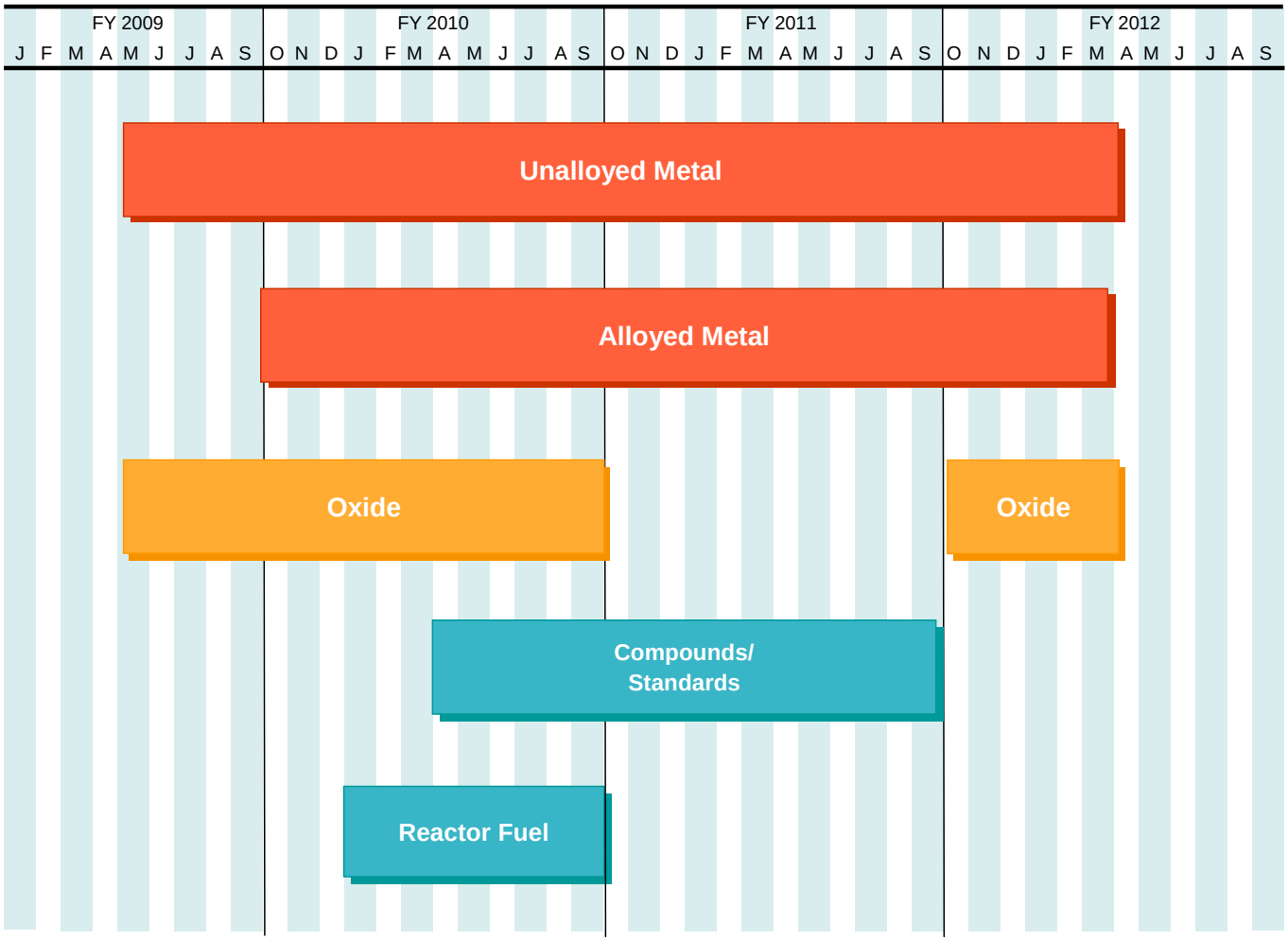


Figure 1 Planned Shipping Schedule Summary

Fiscal Year	HEU	~ Net (kg)	~ U (kg)	# Containers	Sum Net (kg)	Sum U (kg)
	Unalloyed Metal	1881	1880	102		
	Alloyed Metal	0	0	0		
	Oxide	1938	1288	172		
	Compounds/Standards	0	0	0		
2009	Rx Fuel	0	0	0	3819	3168
	Unalloyed Metal	1080	1080	58		
	Alloyed Metal	712	600	32		
	Oxide	2078	1380	184		
	Compounds/Standards(1)	137	77	13		
2010	Rx Fuel	393	36	107	4400	3173
	Unalloyed Metal	1441	1440	78		
	Alloyed Metal	2799	2400	130		
	Oxide	0	0	0		
	Compounds/Standards	500	127	21		
2011	Rx Fuel	0	0	0	4740	3967
	Unalloyed Metal	1209	1208	65		
	Alloyed Metal	459	394	21		
	Oxide	367	244	33		
	Compounds/Standards	0	0	0		
2012	Rx Fuel	0	0	0	2036	1846
	Unalloyed Metal	5611	5608	303		
	Alloyed Metal	3970	3394	183		
	Oxide	4384	2912	389		
	Compounds/Standards	637	204	34		
Totals	Rx Fuel	390	30	107		
	Totals	**14992**	**12148**	**1016**	**14992**	**12148**

(1) UNH from Other than Y-12

LIST OF APPLICABLE DOE DIRECTIVES
May 1, 2008

In addition to the list of applicable directives listed below, the Contractor shall also comply with supplementary directives (e.g., manuals), which are invoked by a Contractor Requirements Document (CRD) attached to a directive. Electronic copies of these documents are available at the following Websites:

http://directives.doe.gov/cgi-bin/currentchecklist
http://www.directives.doe.gov/directives/globsearch-adv.html
http://www.nnsa.doe.gov/
http://www.eh.doe.gov/techstds/standard/standard.html

DIRECTIVE NUMBER	TYPE	DOE DIRECTIVE TITLE
DOE M 470.4-4 Chg 1	Manual	Information Security
DOE M 471.1-1 Chg 1	Manual	Identification and Protection of Unclassified Controlled Nuclear Information Manual
DOE O 471.1A	Order	Identification and Protection of Unclassified Controlled Nuclear Information
DOE O 471.3	Order	Identifying and Protecting Official Use Only Information
DOE M 471.3-1	Manual	Manual for Identifying and Protecting Official Use Only Information
DOE G 471.3-1	Guide	Guide to Identifying Official Use Only Information
DOE M 475.1-1A	Manual	Identifying Classified Information
DOE P 205.1	Policy	Departmental Cyber Security Management Policy
DOE M 205.1-3	Manual	Telecommunications Security Manual

DEFINITIONS
December 2, 2008

As used throughout this Contract, the following terms shall have the meanings set forth below:

1. "Act" means the Atomic Energy Act of 1954, as amended.

2. “Assay” means the total weight of U-235 per kilogram of Material divided by the total weight of all uranium isotopes per kilogram of Material, the quotient of which is multiplied by 100 and expressed as a weight percent.

3. “Business Day” means a day that is not a Saturday, Sunday or observed as a United States Legal Holiday. Unless this term is used, references in this Contract to “day” or “days” refer to a calendar day or calendar days, respectively.

4. "Category 1 Quantities of HEU" means strategic special nuclear material in any combination in a quantity of 5000 grams or more computed by the formula, grams=(grams contained U-235)+2.5 (grams U-233+grams plutonium)

5. "Consumed" or "Consumption" and "Lost" or "Losses” means the reduction in quantity of material that is due to the blending of different assays of Special Nuclear Material or other alteration of the isotopic ratio, processing losses, and the disposition of material in such a manner that it cannot be economically recovered for further use.

6. “Contracting Officer” means a person employed by the Government with the written authority to enter into, administer, and/or terminate contracts and make written determinations on behalf of the Government in accordance with applicable laws, regulations, and procedures.

7. “Derived Low Enriched Uranium” or “Derived LEU” means the Low Enriched Uranium resulting after the blend-down of the HEU to Derived LEU under this Contract.

8. “Diluent” means the natural or other low-assay uranium procured by the Contractor to down-blend the HEU under this Contract, the cost of which is included in the unit prices prescribed in Section B, CLIN 0001.

9. “EBC” means the Equivalent Boron Content as defined in ASTM International Standard C1233-97.

10. "Fiscal Year" means a period of twelve months encompassing October 1 of the calendar year preceding the designated year through September 30 of the designated year, e.g. FY 2008 is October 1, 2007 through September 30, 2008.

11. "Foreign Obligations" means the commitments entered into by the United States under Atomic Energy Act (AEA) section 123 agreements for cooperation in the peaceful uses of atomic energy. Imports and exports of material or equipment pursuant to such agreements are subject to these commitments, which in some cases involve an exchange of information on imports, exports, retransfers with foreign governments, peaceful end-use assurances, and other conditions placed on the transfer of the material or equipment.

12. "Full Market Value" is defined as the sum of the Market Value of Feed Component and the Market Value of Separative Work Unit (SWU) Component. The Feed Component (including U_30_8 and conversion) and the SWU Component shall be calculated using a reference tails assay of 0.25% and a reference feed assay of 0.711%.

13. **"Government" or "U.S. Government" for purposes of this Contract, *generally* means the United States Department of Energy or the National Nuclear Security Administration, its agents, representatives, and those persons acting upon its behalf, but in no event shall mean any Government corporation, such as the Tennessee Valley Authority.**

14. "Government LEU Account" means the quantities of Derived LEU produced under the **C**ontract from the down-blending of HEU, as well as any UF_6 or other LEU converted or exchanged for such Derived LEU, which will be debited and credited **to the Government** in accordance with Section J, Attachment 2, "Holding Agreement."

15. "Highly Enriched Uranium" or "HEU" means uranium enriched to 20 percent or more of the uranium-235 isotope. For purposes of this Contract, it includes HEU in the form of metal, oxide, and Reactor Fuel.

16. "Low Enriched Uranium" or "LEU" means uranium enriched to more than 0.711 percent and less than 20 percent of the uranium-235 isotope, including that which is derived from highly enriched uranium. For purposes of this Contract, LEU includes that derived from the HEU (Derived LEU), in any chemical form, placed in storage for the Low Enriched Uranium Inventory.

17. “Metric Ton Uranium or “MTU” means the weight of uranium in a uranium-bearing material; an MTU is 1,000 kilograms (or 2,200 pounds) of uranium.

18. “National Nuclear Security Administration (NNSA)” means a separately organized agency within the Department of Energy or any successor agency of the Federal Government.

19. “Physical Delivery” means the loading of UF_6 by the Contractor onto the Government’s or its designee’s conveyance/truck or aircraft.

20. “Reactor Fuel” means HEU meeting the reactor fuel description in Section J, Attachment 1.

21. “Remainder LEU” means the total balance of the Government LEU Account less 40 MTU that shall be physically maintained at the Contractor’s facility in the form of UF_6 in accordance with Section J, Attachment 2, “Holding Agreement.”

22. “Source Material” means uranium, thorium, or any other nuclear material determined, pursuant to 42 U.S.C. § 2091, to be source material, or ores containing one or more of the foregoing materials in such concentration as may be determined by regulation.

23. “Special Nuclear Material” or “SNM” means plutonium, uranium-233, uranium enriched in the isotope U-235, and any other material which, pursuant to 42 U.S.C. 2071 (Section 51, as amended, of the Atomic Energy Act of 1954), has been determined to be special nuclear material, but does not include source material; it also includes any material artificially enriched by any of the foregoing, not including source material. For purposes of this Contract, SNM includes both HEU and LEU.

24. “Umpire Sample” means a sample taken, prepared, and stored in an agreed upon manner as provided under the Shipper Receiver Agreement for the purpose of settling a uranium and U-235 measurement difference.

25. “Uranium-235” or “U-235” or ^{235}U means a fissionable uranium isotope with atomic mass number 235.

DOE F 470.1
(05-05)
Replaces DOE F 470.1 (11-02)
All Other Editions are Obsolete

DE-RP52-09NA28609
Section J, Attachment 9

U.S. Department of Energy

CONTRACT SECURITY CLASSIFICATION SPECIFICATION (CSCS)

1. CSSC No.:	2. Previous CSCS No.:	3a. Reason for Action: (Check One) ☑ Add ☐ Change ☐ Terminate b. Item Numbers Modified:

4. This Specification Is For: (Complete as Applicable)

(Check One)

a. ☐ Contract or Other Number ☑ Solicitation
Contract Type: _____

b. Contract Number: DE-RP52-09NA28609 End Date: _____ (Estimated)

c. Contract Number of Prime: _____ End Date: _____ (Estimated)
(Complete if registering or soliciting a subcontract)

5. Specification Is: (Complete as Applicable)

a. Original (Complete data in all cases)	Date
b. Revised (Supercedes all previous specifications)	Date
c. Certificate of Possession	Date
Retention of Classified Matter is Authorized Until	Date
d. Final	Date
Certificate of Non-Possession or Equivalent	Date

6. General Identification of this Procurement

12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory: Receive, store, and generate classified documents and receive, store, and process Category I quantities of Highly Enriched Uranium (HEU).

7. Contractor

a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

8. Prime Contractor (Complete if registering or soliciting a subcontract)

a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

9. Actual Place of Performance (DOE Facilities) (Attach additional entries as necessary on page 3)

a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

Actual Place of Performance **(NON DOE Facilities)** (Attach additional entries as necessary)

a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

10. Clearance and Storage (enter level and category)

a. Classification of Matter to be Accessed:
☐ TSRD ☐ TSFRD ☐ TSNSI ☑ SRD ☐ SFRD ☑ SNSI
☐ CRD ☐ CFRD ☑ CNSI ☐ U

b. Level of Storage Required at Contractor Facility:
☐ TSRD ☐ TSFRD ☐ TSNSI ☑ SRD ☐ SFRD ☑ SNSI
☐ CRD ☐ CFRD ☐ CNSI ☐ U

c. Level of Storage for this Contract:
☐ TSRD ☐ TSFRD ☐ TSNSI ☑ SRD ☐ SFRD ☑ SNSI
☐ CRD ☐ CFRD ☐ CNSI ☐ U

d. Access Authorization: ☑ Q ☐ L

11. This Contract Will Require Access To:

☐ SCI
☐ OTHER DCI CAVEATS
☐ COMSEC
☐ FGI
☐ NATO
☐ WD/SIGMAS: _____
☐ OTHER: _____

12. In Performing this Contract, the Contractor Will:

☐ Have Access to Classified Information Only at Another Contractor's Facility or a Government Activity

☑ Generate Classified Matter

☑ Perform Services That Require Unescorted Access to Security Areas

☐ Have Access to U.S. Classified Information Outside the U.S., Puerto Rico, U.S. Possessions and Trust Territories

☐ Other (Specify)

☑ Receive Classified Matter

☑ Fabricate, Modify, or Store Classified Items (e.g., Hardware or Substances)

☐ Be Authorized to Use the Services of the Office of Scientific & Technical Information to Receive Classified Matter

☐ Require a COMSEC Account

☐ Be Authorized to Use the Defense Courier Service

13. Classification Guidance

The classification guidance needed for this classified effort is identified below. Note: Guidance which is in itself classified should be referenced here and provided under separate cover.

CG-SS-4; CG-TSS-3; CG-MD-1; CG-WM-1; Y/CG-990

14. Security Requirements

Security requirements are established for this contract and are identified in the following contracts/solicitation clauses.

☑ DEAR 952.204-2 Security Requirements
☑ DEAR 952.204-73 Facility Clearance (Solicitation)
☑ DEAR 952.204-70 Classification/Declassification
☐ DEAR 970.5204.1 Counterintelligence (for management contracts ONLY)

15. Surveys

DOE Surveying Office Is Naval Reactors

Elements of this contract are outside the survey responsibility of the Cognizant Security Office and/or the Surveying Office.
☐ No ☐ Yes (Identify specific areas and provide explanation/justification for each)

16. Certification and Signature. Security requirements stated herein are complete and adequate for safeguarding the classified information to be released or generated under this classified contract. All questions shall be referred to the official named below:

a. Typed Name of Procurement Request Originator	b. Title and Organization	c. Telephone (Include Area Code)
	NNSA Y-12 Site Office, Program Manager	

d. Address (Include Zip Code)	e.
National Nuclear Security Administration Y-12 Site Office P.O. Box 2050 Oak Ridge, Tennessee 37831	Signature _____ Date _____
17. Typed Name of Contracting Official Teresa M. Martinez	Signature _____ Date _____
18. Typed Name of Classification Officer (Approval of Block 13)	Signature _____ Date _____
19a. Typed Name of Local DOE Security Officer a. Responsible Office	Signature _____ Date _____

20. Required Distribution

☑ Contractor
☐ Subcontractor
☑ Cognizant Security Office
☐ Administering Contracting Officer
☐ Surveying Office If Different than Cognizant Security Office
☐ Others, as Necessary

21. General Comments:

Q Clearance is required to access (receive, store, and process) Category I quantities of SNM.

9. Actual Place of Performance - **DOE Facilities**		
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. Facility Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

9. Actual Place of Performance - **NON DOE Facilities**		
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)
a. ID Code	b. Name, Address, and Zip Code	c. Cognizant Security Office (Name, Address, and Zip Code)

NOTICE: The following solicitation provisions pertinent to this section are hereby incorporated in full text:

A. FEDERAL ACQUISITION REGULATION SOLICITATION PROVISIONS IN FULL TEXT

52.204-8 ANNUAL REPRESENTATIONS AND CERTIFICATIONS (JAN 2006)

(a)

(1) The North American Industry Classification System (NAICS) code for this acquisition is 325188.

(2) The small business size standard is 1,000 Employees.

(3) The small business size standard for a concern which submits an offer in its own name, other than on a construction or service contract, but which proposes to furnish a product which it did not itself manufacture, is 500 employees.

(b)

(1) If the clause at 52.204-7, Central Contractor Registration, is included in this solicitation, paragraph (c) of this provision applies.

(2) If the clause at 52.204-7 is not included in this solicitation, and the Offeror is currently registered in CCR, and has completed the ORCA electronically, the Offeror may choose to use paragraph (c) of this provision instead of completing the corresponding individual representations and certification in the solicitation. The Offeror shall indicate which option applies by checking one of the following boxes:

[ ] (i) Paragraph (c) applies.

[ ] (ii) Paragraph (c) does not apply and the Offeror has completed the individual representations and certifications in the solicitation.

(c) The Offeror has completed the annual representations and certifications electronically via the Online Representations and Certifications Application (ORCA) website at http://orca.bpn.gov. After reviewing the ORCA database information, the Offeror verifies by submission of the offer that the representations and certifications currently posted electronically have been entered or updated within the last 12 months, are current, accurate, complete, and applicable to this solicitation (including the business size standard applicable to the NAICS code referenced for this solicitation), as of the date of this offer and are incorporated in this offer by reference (see FAR 4.1201); except for the changes identified below [Offeror to insert changes, identifying change by clause number, title, date]. These amended representation(s) and/or certification(s) are also incorporated in this offer and are current, accurate, and complete as of the date of this offer.

FAR Clause	Title	Date	Change

Any changes provided by the Offeror are applicable to this solicitation only, and do not result in an update to the representations and certifications posted on ORCA.

52.225-18 PLACE OF MANUFACTURE (SEP 2006)

(a) Definitions. As used in this clause—

"Manufactured end product" means any end product in Federal Supply Classes (FSC) 1000-9999, except—

(1) FSC 5510, Lumber and Related Basic Wood Materials;

(2) Federal Supply Group (FSG) 87, Agricultural Supplies;

(3) FSG 88, Live Animals;

(4) FSG 89, Food and Related Consumables;

(5) FSC 9410, Crude Grades of Plant Materials;

(6) FSC 9430, Miscellaneous Crude Animal Products, Inedible;

(7) FSC 9440, Miscellaneous Crude Agricultural and Forestry Products;

(8) FSC 9610, Ores;

(9) FSC 9620, Minerals, Natural and Synthetic; and

(10) FSC 9630, Additive Metal Materials.

"Place of manufacture" means the place where an end product is assembled out of components, or otherwise made or processed from raw materials into the finished product that is to be provided to the Government. If a product is disassembled and reassembled, the place of reassembly is not the place of manufacture.

(b) For statistical purposes only, the Offeror shall indicate whether the place of manufacture of the end products it expects to provide in response to this solicitation is predominantly—

(1) [ ] In the United States (Check this box if the total anticipated price of offered end products manufactured in the United States exceeds the total anticipated price of offered end products manufactured outside the United States); or

(2) [ ] Outside the United States.

52.230-1 COST ACCOUNTING STANDARDS NOTICES AND CERTIFICATION (JUN 2000)

Note: This notice does not apply to small businesses or foreign governments. This notice is in three parts, identified by Roman numerals I through III.

Offerors shall examine each part and provide the requested information in order to determine Cost Accounting Standards (CAS) requirements applicable to any resultant contract.

If the Offeror is an educational institution, Part II does not apply unless the contemplated contract will be subject to full or modified CAS coverage pursuant to 48 CFR 9903.201-2(c)(5) or 9903.201-2(c)(6), respectively.

I. DISCLOSURE STATEMENT--COST ACCOUNTING PRACTICES AND CERTIFICATION

(a) Any contract in excess of $500,000 resulting from this solicitation will be subject to the requirements of the Cost Accounting Standards Board (48 CFR Chapter 99), except for those contracts which are exempt as specified in 48 CFR 9903.201-1.

(b) Any Offeror submitting a proposal which, if accepted, will result in a contract subject to the requirements of 48 CFR Chapter 99 must, as a condition of contracting, submit a Disclosure Statement as required by 48 CFR 9903.202. When required, the Disclosure Statement must be submitted as a part of the Offeror's proposal under this solicitation unless the Offeror has already submitted a Disclosure Statement disclosing the practices used in connection with the pricing of this proposal. If an applicable Disclosure Statement has already been submitted, the Offeror may satisfy the requirement for submission by providing the information requested in paragraph (c) of Part I of this provision.

CAUTION: In the absence of specific regulations or agreement, a practice disclosed in a Disclosure Statement shall not, by virtue of such disclosure, be deemed to be a proper, approved, or agreed-to practice for pricing proposals or accumulating and reporting contract performance cost data.

(c) Check the appropriate box below:

[ ] (1) Certificate of Concurrent Submission of Disclosure Statement.

The Offeror hereby certifies that, as a part of the offer, copies of the Disclosure Statement have been submitted as follows: (i) original and one copy to the cognizant Administrative Contracting Officer (ACO) or cognizant Federal agency official authorized to act in that capacity (Federal official), as applicable, and (ii) one copy to the cognizant Federal auditor.

(Disclosure must be on Form No. CASB DS-1 or CASB DS-2, as applicable. Forms may be obtained from the cognizant ACO or Federal official and/or from the loose-leaf version of the Federal Acquisition Regulation.)

Date of Disclosure Statement: _____
Name and Address of Cognizant ACO or Federal Official Where Filed:
_____

The Offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the Disclosure Statement.

[ ] (2) Certificate of Previously Submitted Disclosure Statement.

The Offeror hereby certifies that the required Disclosure Statement was filed as follows:

Date of Disclosure Statement: _____ Name and Address of Cognizant ACO or Federal Official Where Filed: _____

The Offeror further certifies that the practices used in estimating costs in pricing this proposal are consistent with the cost accounting practices disclosed in the applicable Disclosure Statement.

[ ] (3) Certificate of Monetary Exemption.

The Offeror hereby certifies that the Offeror, together with all divisions, subsidiaries, and affiliates under common control, did not receive net awards of negotiated prime contracts and subcontracts subject to CAS totaling $50 million or more in the cost accounting period immediately preceding the period in which this proposal was submitted. The Offeror further certifies that if such status changes before an award resulting from this proposal, the Offeror will advise the Contracting Officer immediately.

[ ] (4) Certificate of Interim Exemption.

The Offeror hereby certifies that (i) the Offeror first exceeded the monetary exemption for disclosure, as defined in (3) of this subsection, in the cost accounting period immediately preceding the period in which this offer was submitted and (ii) in accordance with 48 CFR 9903.202-1, the Offeror is not yet required to submit a Disclosure Statement. The Offeror further certifies that if an award resulting from this proposal has not been made within 90 days after the end of that period, the Offeror will immediately submit a revised certificate to the Contracting Officer, in the form specified under subparagraph (c)(1) or (c)(2) of Part I of this provision, as appropriate, to verify submission of a completed Disclosure Statement.

CAUTION: Offerors currently required to disclose because they were awarded a CAS-covered prime contract or subcontract of $50 million or more in the current cost accounting period may not claim this exemption (4). Further, the exemption applies only in connection with proposals submitted before expiration of the 90-day period following the cost accounting period in which the monetary exemption was exceeded.

II. COST ACCOUNTING STANDARDS--ELIGIBILITY FOR MODIFIED CONTRACT COVERAGE

If the Offeror is eligible to use the modified provisions of 48 CFR 9903.201-2(b) and elects to do so, the Offeror shall indicate by checking the box below. Checking the box below shall mean that the resultant contract is subject to the Disclosure and Consistency of Cost Accounting Practices clause in lieu of the Cost Accounting Standards clause.

[ ] The Offeror hereby claims an exemption from the Cost Accounting Standards clause under the provisions of 48 CFR 9903.201-2(b) and certifies that the Offeror is eligible for use of the Disclosure and Consistency of Cost Accounting Practices clause because during the cost accounting period immediately preceding the period in which this proposal was submitted, the Offeror received less than $50 million in awards of CAS-covered prime contracts and subcontracts. The Offeror further certifies that if such status changes before an award resulting from this proposal, the Offeror will advise the Contracting Officer immediately.

Caution: An Offeror may not claim the above eligibility for modified contract coverage if this proposal is expected to result in the award of a CAS-covered contract of $50 million or more or if, during its current cost accounting period, the Offeror has been awarded a single CAS-covered prime contract or subcontract of $50 million or more.

III. ADDITIONAL COST ACCOUNTING STANDARDS APPLICABLE TO EXISTING CONTRACTS

The Offeror shall indicate below whether award of the contemplated contract would, in accordance with subparagraph (a)(3) of the Cost Accounting Standards clause, require a change in established cost accounting practices affecting existing contracts and subcontracts.

[ ] YES [ ] NO

B. NNSA OTHER SOLICITATION PROVISIONS IN FULL TEXT

K001 SIGNATURE/CERTIFICATION (FEB 2005)

By completing and submitting a proposal/bid via Industry Interactive Procurement System (IIPS), the Offeror certifies that the representations and certifications are accurate, current, and complete. The Offeror further certifies that it will notify the Contracting Officer of any changes to these representations and certifications. The representations and certifications made by the Offeror, as contained herein, concern matters within the jurisdiction of an agency of the United States and the making of false, fictitious, or fraudulent representation or certification may render the maker subject to prosecution under 18 U.S.C. 1001.

___
Typed Name and Title of the Officer or Employee

Responsible for the Offer

___
Date of Execution

___
Name of Organization

___
Street

___
City, State, Zip Code

___
Solicitation Number

I. NOTICE: The following solicitation provisions pertinent to this section are hereby incorporated by reference:

A. FEDERAL ACQUISITION REGULATION SOLICITATION PROVISIONS

52.215-1 INSTRUCTIONS TO OFFERORS--COMPETITIVE ACQUISITION (JAN 2004)
52.222-24 PREAWARD ON-SITE EQUAL OPPORTUNITY COMPLIANCE EVALUATION (FEB 1999)

B. DEPARTMENT OF ENERGY ACQUISITION REGULATION SOLICITATION PROVISIONS

952.204-73 FACILITY CLEARANCE (MAY 2002)
952.219-70 DOE MENTOR-PROTEGE PROGRAM (MAY 2000)
952.233-4 NOTICE OF PROTEST FILE AVAILABILITY (SEP 1996)

II. NOTICE: The following solicitation provisions pertinent to this section are hereby incorporated in full text:

A. FEDERAL ACQUISITION REGULATION SOLICITATION PROVISIONS IN FULL TEXT

52.216-1 TYPE OF CONTRACT (APR 1984)

The Government contemplates award of a single firm fixed price (FFP) type contract arrangement where the Contractor will be compensated for down-blending services by receiving title to a portion of the Derived LEU, and will be compensated for storage by having use of a portion of the stored Derived LEU.

52.233-2 SERVICE OF PROTEST (SEP 2006)

(a) Protests, as defined in section 33.101 of the Federal Acquisition Regulation, that are filed directly with an agency, and copies of any protests that are filed with the Government Accountibility Office (GAO), shall be served on the Contracting Officer (addressed as follows) by obtaining written and dated acknowledgment of receipt from Teresa M. Martinez, United States Department of Energy, NNSA Service Center/OBS/FAD, PO. Box 5400, Albuquerque, NM 87185-5400, (505) 845-4127.

(b) The copy of any protest shall be received in the office designated above within one day of filing a protest with the GAO.

52.252-1 SOLICITATION PROVISIONS INCORPORATED BY REFERENCE (FEB 1998)

This solicitation incorporates one or more solicitation provisions by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. The Offeror is cautioned that the listed provisions may include blocks that must be completed by the Offeror and submitted with its quotation or offer. In lieu of submitting the full text of those provisions, the Offeror may identify the provision by paragraph identifier and provide the appropriate information with its quotation or offer. Also, the full text of a solicitation provision may be accessed electronically at this/these address(es): http://farsite.hill.af.mil/ or http://www.arnet.gov/far/

B. DEPARTMENT OF ENERGY ACQUISITION REGULATION SOLICITATION PROVISIONS IN FULL TEXT

952.233-2 SERVICE OF PROTEST (MAR 2002)

As prescribed in 48 CFR 933.106(a), add the following to the end of the Provision at FAR 52.233-2:

(c) Another copy of a protest filed with the General Accounting Office shall be furnished to the following address within the time periods described in paragraph (b) of this clause: U.S. Department of Energy, Assistant General Counsel for Procurement and Financial Assistance (GC-61), 1000 Independence Avenue, S.W., Washington, DC 20585, Fax: (202) 586-4546.

C. NNSA OTHER SOLICITATION PROVISIONS IN FULL TEXT

L001 SUPPLEMENTAL SOLICITATION DEFINITIONS (FEB 2007)

"Electronic signature" or "signature" means a method of signing an electronic message that-

(a) Identifies and authenticates a particular person as the source of the electronic message; and

(b) Indicates such person's approval of the information contained in the electronic message.

"IIPS" is the acronym for the "Industry Interactive Procurement System" and means the hardware, firmware, and software platform, including the associated databases used by NNSA to conduct electronic business.

"Proposal" means the electronic offer submitted in response to this Request for Proposal via IIPS or an authorized alternative in response to this solicitation.

L002 INTERNET SITES (FEB 2007)

Essential Internet sites for preparing and submitting proposals can be found at the urls listed below:

Federal Business Opportunities (FedBizOpps): http://www.fedbizopps.gov/

DOE e-Center--Business and Financial Assistance Opportunities with Energy: http://e-center.doe.gov

Federal Acquisition Regulation (FAR) clauses and provisions; Department of Energy Acquisition Regulation (DEAR) Clauses and Provisions; and Federal Acquisition Circulars (FACs) which contain the most recent changes to the FAR:
http://management.energy.gov/policy_guidance/procurement_acquisition.htm

DOE Orders and Directives: http://www.directives.doe.gov/

Interactive Industry Procurement System (IIPS) User's Guide For Contractors: http://e-center.doe.gov/doebiz.nsf/Help?OpenForm

L003 EXPENSES RELATED TO PROPOSAL OR BID SUBMISSIONS (FEB 2007)

This solicitation does not commit the Government to pay any costs incurred in the submission of any proposal or bid; in making necessary studies or designs for the preparation thereof; or to acquire or contract for any services.

L005 RESTRICTION OF CONTACTS (APR 2008)

Concurrent with the release of this RFP, appropriate notification will be given to the NNSA's management chain to advise them that the 12.1 MT Highly Enriched Uranium - Down-blending Services and Low Enriched Uranium Inventory source selection is in progress and that contact by participating Offerors on the subject of this RFP with anyone other than the Contracting Officer or Contract Specialist is inappropriate. With the exception of provisions provided in this solicitation, potential Offerors to this RFP shall not attempt such contact until after award announcements are made by the Contracting Officer.

L007 AMENDMENT OF SOLICITATION PRIOR TO PROPOSAL CLOSING DATE (FEB 2007)

The Government reserves the right to amend the solicitation prior to the closing time for receipt of proposals by issuance of formal amendment(s) (Standard Form 30) to this RFP. If such amendments require material changes, the proposal closing date may be postponed by enough days to enable Offerors to revise their proposals. In such cases, the amendment will include an announcement of the new proposal closing date and time.

L008 QUESTIONS REGARDING THIS SOLICITATION (FEB 2007)

Discussions and/or correspondence relating to this RFP must be submitted via IIPS at: <http://e-center.doe.gov/doebiz.nsf/Help?OpenForm>. Please submit questions regarding this RFP in writing by Noon (EASTERN STANDARD TIME) on **December 2, 2008**. A copy of all questions and their respective answers will be published on the IIPS web site. An amendment to the solicitation will be issued if changes to the RFP are needed as a result of the questions. It may not be possible to respond to questions or comments received after this time. If an Offeror believes that the requirements in these instructions contain an error or omission, the Offeror shall immediately notify the Contracting Officer in writing with supporting rationale.

L009 NUMBER OF AWARDS (FEB 2007)

It is anticipated that there will be one (1) award resulting from this solicitation. However, the Government reserves the right to make multiple awards, or no award, if it is considered to be in the Government's best interest to do so.

L010 SUBMISSION OF COST OR PRICING DATA (JUL 2008)

It is anticipated that pricing of this action will be based on adequate price competition; therefore, Offerors are not required to submit a Certificate of Current Cost or Pricing Data. However, if after receipt of proposals, it is determined that adequate price competition does not exist, cost or pricing data (see FAR 15.406-2, Certificate of Current Cost or Pricing Data) shall be required. The Offeror shall provide current, complete and accurate cost or pricing data within 14 calendar days after receipt of the Contracting Officer's request.

L011 PROPOSAL SUBMISSION ADDRESS, DUE DATES, AND HAND CARRIED OFFERS (OCT 2008)

(a) Proposals must be submitted via the Industry Interactive Procurement System (IIPS) with the exception of Classified and Unclassified Controlled Nuclear Information (UCNI) information (see L011, paragraph (c) below). Proposals must be received through the IIPS web site NO LATER THAN 4:00 PM (EASTERN STANDARD TIME) on **January 20, 2009**. See FAR 52.215-1(c)(3)(ii) "Instructions to Offerors-Competitive Acquisition," for treatment of late proposals. Submission of electronic proposals via IIPS will constitute submission of signed copies of the required documents. Each proposal must be submitted in accordance with the instructions in the IIPS User Guide, which is available at: <http://e-center.doe.gov/doebiz.nsf/Help?OpenForm>. It is the responsibility of the Offeror, prior to the offer due date and time, to verify successful transmission in accordance with the Proposal Response (Submission) Instructions in the IIPS User Guide. Proposal files are to be formatted in the following applications:

Adobe Acrobat 5.0 (PDF) or higher, Word 2000 or higher, Excel 2000 or higher, or PowerPoint 2000 or higher.

(b) In addition to the submission of the proposal via IIPS, Offerors must also submit Hard Copies of Volume I, II, and III along with a copy on a CD or DVD, with the exception of any classified and UCNI information, at the address listed below POSTMARKED NO LATER THAN **January 20, 2009**:

Mailing Address:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
P.O. Box 5400
Albuquerque, NM 87185-5400

Overnight Express Address:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
Pennsylvania and H Streets
Albuquerque, NM 87116

Hand Carried Address*:

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
Building 20388
Kirtland AFB, NM

* Offers may be hand carried as long as they are received before the closing date established herein. Offerors are cautioned that rigorous security procedures are in place at this Government facility that may result in additional time being required to hand carry documents. The responsibility of delivery of any hand carried documents within the stated due date in this RFP rests completely with the Offeror.

(c) Classified information shall be submitted in accordance with the requirements in DOE Manual 470.4-4 Section A, Classified Matter Protection and Control. UCNI information shall be submitted in accordance with the requirements of DOE Manual 471.1-1, Identification and Protection of Unclassified Controlled Nuclear Information Manual, Chapter II. The Offeror shall adhere to the marking, transmission, and creation requirements of the DOE Manuals. Offerors must submit Hard Copies only of Classified and UCNI information at the address listed below POSTMARKED NO LATER THAN **January 20, 2009**:

Classified Mailing Address:

CLASSIFIED OUTER LABEL
National Nuclear Security Administration
Service Center
P. O. Box 5400
Attn: Leticia Potts
Albuquerque, NM 87185-5400

CLASSIFIED INNER LABEL
Same as above

UCNI Mailing Address (packaged in a single, opaque envelope or wrapping and marked as UCNI):

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
P.O. Box 5400
Albuquerque, NM 87185-5400

Classified Overnight Mailing Address:

CLASSIFIED INNER LABEL
National Nuclear Security Administration
Service Center
Pennsylvania & H Streets
Attn: Mail Center
Albuquerque, NM 87116

CLASSIFIED OUTER LABEL
National Nuclear Security Administration
Service Center
Pennsylvania & H Streets
Attn: Leticia Potts
Albuquerque, NM 87116

UCNI Overnight Mailing Address (packaged in a single, opaque envelope or wrapping and marked as UCNI):

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts
Pennsylvania and H Streets
Albuquerque, NM 87116

Classified Hand Carried Address**

CLASSIFIED INNER LABEL
National Nuclear Security Administration
Service Center
Pennsylvania & H Streets
Attn: Mail Center
Albuquerque, NM 87116

CLASSIFIED OUTER LABEL
National Nuclear Security Administration
Service Center
Pennsylvania & H Streets
Attn: Leticia Potts
Albuquerque, NM 87116

UCNI Hand Carried Address (packaged in a single, opaque envelope or wrapping and marked as UCNI):

National Nuclear Security Administration
Service Center/Office of Business Services
Attn: Leticia Potts

Building 20388
Kirtland AFB, NM 87116

**To hand carry classified information, the Offeror will need to report to the NNSA Service Center North Guard Main Entry, Building 20380. The Offeror will then need to request an authorized representative from the Mail Center to accept the classified information. Offerors are cautioned that rigorous security procedures are in place at this Government facility that may result in additional time being required to hand carry documents. The responsibility of delivery of any hand carried documents within the stated due date in this RFP rests completely with the Offeror.

(d) The electronic proposal submitted through IIPS, along with any Hard Copies of classified or UCNI information submitted, will be considered to be the proposal that is binding on the Offeror. Any discrepancies between the electronic proposal submitted through IIPS and Hard Copies of non-classified and non-UCNI information will be resolved in favor of the version submitted through IIPS.

L012 ALTERNATE PROPOSALS (FEB 2007)

Alternate proposals are not desired by the Government. Any exceptions or deviations to the terms delineated in the solicitation may make the offer unacceptable for award without discussions. If an Offeror proposes exceptions to the terms and conditions contained in the RFP, the Government may make an award without discussions to another Offeror that did not take exception to the terms and conditions of the solicitation

L014 INTENT TO AWARD WITHOUT DISCUSSIONS (JUL 2008)

As set forth in Section L, Clause FAR 52.215-1(f)(4), the Government intends to make an award without discussions. The Government may make a final determination as to whether the Offeror's proposal is acceptable or unacceptable solely on the basis of the initial proposal as submitted. Accordingly, Offerors are advised to submit an initial proposal that is fully and clearly acceptable without the need for additional information or explanation and which contains the Offeror's best terms from a management, technical, past performance and price standpoint. The Government reserves the right to conduct discussions if determined by the Contracting Officer to be necessary.

L024 INSTRUCTIONS FOR SUBMITTING FOREIGN OWNERSHIP, CONTROL OR INFLUENCE (FOCI) INFORMATION (OCT 2008)

(a) The Offeror shall submit FOCI information in accordance with the Section L Provision entitled, DEAR 952.204-73, Facility Clearance, using the Department of Energy (DOE) Electronic FOCI (eFOCI) submission system located at https://foci.td.anl.gov/.

(b) New users to the eFOCI system will request initial access to the eFOCI system prior to submitting the FOCI information for this solicitation. Offerors should select 'NNSA Service Center Procurement/Purchasing' as the FOCI Office that will review the FOCI Submission. Offerors are encouraged to transmit FOCI information by the deadline for proposal submission. Specific problems maneuvering through the fields within the eFOCI system can be clarified by contacting the eFOCI help desk at (630) 252-6566 or fociserver@anl.gov.

(c) Electronic signatures are not accepted; therefore, signed originals of any documents requiring signatures to include the SF 328, 'Certificate Pertaining to Foreign Interests', executed in accordance with the instructions on the certification section of the SF 328, shall be submitted to the Contracting Officer. The SF 328 is required for first time submissions, 5 year updates or any time there are changes to the SF 328.

(d) Department of Defense (DOD) assigned commercial and government entity (CAGE) code that can verify an active facility clearance/positive FOCI determination exists with DOD is acceptable in lieu of the SF 328.

(e) If the company has an active DOE facility clearance and is in compliant with regulations, a resubmission is not required. However, companies are required to submit annual certifications and when applicable, submit significant changes. Guidance and instructions is available on the eFOCI website.

L025 PROPOSAL PREPARATION INSTRUCTIONS: GENERAL (OCT 2008)

(a) GENERAL INFORMATION

(1) Proposal Preparation Instructions, General. These general proposal preparation instructions provide general submission requirements and prescribe the format of proposal documents. More specific information pertaining to the content of the proposals is identified and described in subsequent Section L provisions.

(2) The proposal must include the information and follow the prescribed format in the subparagraphs below and contain the specific content identified in the Section L provisions. Failure to follow procedures and provide any of the documents or information may be considered a material omission and may adversely affect an Offeror's evaluation. A proposal that is sufficiently documented to support performance/price in a complete, orderly, and detailed manner will enable the Government to expedite the completion of a thorough and fair evaluation.

(3) Offerors shall notify the Contracting Officer (CO) no later than November 18, 2008, if submission of classified or UCNI information is necessary to fully address the proposal requirements of the RFP. The Offeror shall identify to the CO the classification level of the classified information being submitted (Top Secret, Secret, or Confidential) and the category of the classified information (Restricted Data, Formerly Restricted Data, or National Security Information). Classified and UCNI information shall be submitted in accordance with L011.

(4) Information Provided. The Government will evaluate on the basis of information provided therein. The Government will not assume that an Offeror possesses any capacity unless such a capacity is established in the proposal.

(b) PROPOSAL FORMAT

(1) Proposals, including any from subcontractors, affiliates and all teaming or other Contractor arrangements, must conform to this solicitations regarding preparation of offers. Failure to comply with the proposal format set forth in this solicitation may result in the elimination of the Offeror or material not being evaluated. To aid in the evaluation, proposals must be clearly and concisely written as well as being neat, indexed (cross-indexed as appropriate), and logically assembled. All pages of each volume shall be appropriately numbered, and identified with the name of the Offeror, the date, and the solicitation number.

(2) The proposal shall consist of three volumes. Each Offeror's proposal shall be organized as stated in the table below. Information required for proposal evaluation that is not found in its designated volume or tab may not be evaluated and may result in an unfavorable evaluation. In addition to the number of hard copies to be provided, as stated below, the Offeror shall submit a CD or DVD of the entire proposal as described in Section L011, (b) above. Page limitations if any, for each volume are specified below.

VOLUME #	TITLE	# OF PAPER COPIES	PAGE LIMIT
Volume I	Offer & Other Documents	3	No page limit
Volume II	Technical & Past Performance Information	5	30*

Volume III	Cost Proposal	3	No page limit

* Volume II Page Count does not include the information provided in Tabs 1 and 3; there are no page limits for Tabs 1 and 3.

(3) Each volume designated above, must also be submitted individually according to the instructions detailed in the "IIPS User Guide" at http://e-center.doe.gov/doebiz.nsf/Help?OpenForm. See L011 for further information.

(4) Table of Contents. The Offeror shall have a table of contents in each proposal volume that identifies the section, sub-section, paragraph titles, and page numbers. Also include a list of all tables and figures.

(5) Glossary. Each volume shall contain a glossary of all abbreviations and acronyms used, including a definition for each.

(6) Page Description: Page size shall be 8.5 x 11 inches for text pages and a maximum of 11 x 17 inches for spreadsheet, charts, tables, diagrams or design drawings. Page margins shall be a minimum of one inch at the top, bottom and each side. Pages shall be numbered sequentially by volume and by section within the volumes. The name of the Offeror, solicitation number, date, page number and the legend at FAR 52.215-1(e), "Restriction on Disclosure and Use of Data," as appropriate, shall be provided on each page and is the only information that can be displayed within the one inch top, bottom, and side margins. A font size smaller than that described in paragraph (7) below can be used for information within the margins, however, other text reductions are unacceptable.

(7) Text: The text, including spreadsheet, charts, tables, diagrams or design drawings graphs, tables and spreadsheets throughout the proposal, shall be 12 point (or larger), single-spaced, with Times New Roman preferred, but Courier, Geneva, Arial or Universal font type is allowable. Single or double spacing is acceptable for those pages identified under the "Page Count Exceptions," paragraph (9) below. Two columns of text per page and use of boldface type for paragraph headings are acceptable.

(8) Information in Volume II will only be read and evaluated up to the page limitation specified for each evaluation criterion. Page counting will begin with the first page and continue up to the page limitation. Pages exceeding the page count will not be read or evaluated. No material may be incorporated by reference (including any information from Volume I, II, or III) as a means to circumvent the page limitation.

(9) Page Count Exceptions. Table of Contents, Title Pages and Glossary will not be counted towards the page limitation.

(10) Binding: Hard copies of proposal shall be separately bound in loose-leaf, three-ring binders. The number of copies for each volume is specified in L025 Paragraph (b) (2) above. Elaborate format and binding are neither necessary nor desirable. All binders will be capable of lying flat when opened. The cover and spine of each binder will clearly identify the Offeror's name, volume number, RFP number, and copy number (e.g. copy 2 of 5). The original for each volume will be clearly identified on the cover and the spine. All binders will allow for easy removal and replacement of pages.

(11) Restrictions on Disclosure and Use of Data. The Offeror's attention is directed to FAR 52.215-1, "Instructions to Offerors--Competitive Acquisition," in regards to the appropriate manner of marking proposals that include information in which disclosure to the public is not desired nor use by the Government except for evaluation purposes.

(12) All copies of the proposals shall become the property of the Government. The original copies shall be maintained in the official contract file and the extra copies will be destroyed using the appropriate methods to protect the Offerors' competition sensitive information.

L026 PROPOSAL PREPARATION INSTRUCTIONS: VOLUME I--OFFER AND OTHER DOCUMENTS (APR 2008)

(a) General. Volume I, Offer and Other Documents, shall contain a Proposal Cover Sheet and Tabs 1 through 6. Organize Volume I as detailed below.

(b) Content.

(1) Proposal Cover Sheet: The proposal cover sheet is required by FAR 52.215-1(c)(2) entitled, "Instructions to Offerors-Competitive Acquisition," which has been included by reference in this Section L. The proposal cover sheet shall be prepared on the company's letterhead. The proposal cover sheet shall identify all enclosures being transmitted and shall be used only to transmit the proposal and shall include no other information. At a minimum, provide the following information in the Proposal Cover Sheet:

(i) Solicitation number;

(ii) The name, address, and telephone and facsimile numbers of the Offeror (and electronic address if available);

(iii) DUNS, CAGE, and tax identification numbers (TINs) of the Offeror;

(iv) A statement specifying the extent of agreement with all terms and conditions, and provisions included in the solicitation;

(v) Names, titles, and telephone and facsimile numbers (and electronic addresses if available) of persons authorized to negotiate on the Offeror's behalf with the Government in connection with this solicitation;

(vi) Name, title, and signature of person authorized to sign the proposal. Proposals signed by an agent shall be accompanied by evidence of that agent's authority, unless that evidence has been previously furnished to the issuing office; and

(vii) Acknowledge that your company's data at the Central Contractor Registration website is current per FAR Clause 52.204-7, Central Contractor Registration.

(2) TAB -1: Tab 1 shall contain the Standard Form (SF) 33--Solicitation, Offer and Award, Section B, Section F, and Section I

(i) Executed copies of these documents should be secured within a document protector and not "hole-punched." The Offeror shall complete Blocks 13 through 18 of the SF 33 and duly executed with an original signature by an official authorized to bind the company in accordance with instructions at FAR 4.102, Contractor's signature. Enter your proposed price for this acquisition on Part I, Section B - "The Schedule - Supplies or Services and Prices/Costs" ensuring that all Contract Line Item Numbers (CLINs) have been filled-in as to price;

(ii) Offerors are instructed to fill-in Part I, Section F - "The Schedule - Deliveries or Performance," Contract Clause "F002 Principal Place of Performance." The Offeror shall provide confirmation that it can meet the required performance periods in Section F of the contract or if it proposes to accomplish the work sooner than the Government's required performance period, provide its proposed schedule for CLIN 0001. Note, a proposed performance schedule shorter than the Government's required schedule will not be evaluated as more favorable for an Offeror;

(iii) Offerors are instructed to fill-in Part II, Section I - "Contract Clauses," FAR Clauses 52.219-28 and 52.223-3; and

(iv) By signing and submitting the SF 33, the Offeror commits to accept the resulting contract as written. Any exceptions or deviations by the Offeror to the terms and conditions stated in this solicitation may make the offer unacceptable for award without discussions.

(3) TAB - 2: Tab 2 shall contain information pertaining to Section K, Representations, Certifications, and Other Statements of Offerors as follows:

Completed Section K, Representations, Certifications, and Other Statements of Offerors. Also include a copy of the information submitted in the Online Representations and Certifications Application (ORCA) - see https://orca.bpn.gov. Each member of a “contractor team arrangement,” including subcontractors, if proposed, must separately complete, sign, and submit the Section K, Representations, Certifications, and Other Statements of Offerors.

(4) TAB - 3: Tab 3 shall contain information regarding the Offeror's organizational type, if applicable, as follows:

(i) Corporate, Partnership, Joint-Venture Certificate, found at Section L attachment entitled, "Corporate, Partnership, Joint Venture Certificates;"

(ii) Joint-Venture Agreement or Operating Agreement that delineates the relationship between the firms, identifies authorities to bind the firm and signed by the parties, and the anticipated roles and responsibilities in satisfying the requirements in the PWS and Holding Agreement; and

(iii) Provide a narrative or an organizational chart for the team that shows the management and administrative lines of authority and responsibilities between all corporate entities that comprise the Offeror's “contractor team arrangement” and the Government.

(5) TAB - 4: Tab 4 shall contain information pertaining to any exceptions taken to the terms or conditions as follows:

The Offeror shall provide a list of, and the basis for, any exceptions taken to the terms or conditions within this solicitation/contract or a statement that the Government's proposed terms and conditions contained in this solicitation/contract are acceptable. Indicate any clauses not applicable to the Offeror and the reason for exemption. Offerors are reminded that this is a competitive acquisition and any proposed exceptions or deviations to the requirements as stated in this solicitation may be cause for the Government to make an award without discussions to another Offeror that did not take exception to the terms and conditions of the solicitation.

(6) TAB - 5: Tab 5 shall contain the following "Additional Information:"

(i) Company/Division Address, Identifying Codes, and Applicable Designations. The Offeror shall provide company/division's street address, county and facility code; CAGE code; DUNS code; size of business for the applicable NAICS code (large or small); and labor surplus area designation. This same information must be provided if the work for this contract will be performed at any other location(s);

(ii) Vietnam Era Veterans' Readjustment Assistance Act of 1972 (VETS 100). The Offeror shall provide evidence supporting that the Offeror is VETS 100 compliant (See web site www.vets100.com);

(iii) Contract Security Classification Specification (reference Section J attachment entitled, "CSCS Form"). Offerors who have either a Department of Defense or a Department of Energy Facility Clearance shall provide a Facility Clearance code for themselves and all proposed team members/subcontractors; and

(iv) Foreign Ownership, Control or Influence (FOCI) Information. The Offeror shall submit signed originals of any documents requiring signatures to include the Standard Form 328, "Certificate Pertaining to Foreign Interests" and one hard copy of its complete FOCI package. Executed originals of signed documents should be secured within a document protector and not "hole -punched." See L024 for further information.

L027 PROPOSAL PREPARATION INSTRUCTIONS: VOLUME II--TECHNICAL AND PAST PERFORMANCE INFORMATION (OCT 2008)

(a) General. Volume II, Technical and Past Performance Information, shall contain all information and material submitted in accordance with the following instructions, which will be evaluated under the Criteria listed in Section M, "Evaluation Criteria."

(b) Content.

(1) TAB - 1: Criterion 1, NRC License(s) and/or Applicable Certificate(s).

The Offeror or, as may be applicable, its team members or subcontractors, must hold a current NRC approved/issued license(s) or certificate(s) with appropriate conditions, which authorizes the licensee or certificate holder to receive, acquire, possess, and transfer Category 1 quantities of HEU and sufficient quantities of LEU to perform the requirements of the PWS and Holding Agreement within the United States. Each team member/subcontractors is not required to possess a current license or certificate to receive, acquire, possess, and transfer both the Category 1 quantities of HEU and the LEU, but the Offeror, or, as may applicable its teaming members or subcontractors must possess the appropriate and applicable current license(s) or certificate(s) which authorizes each entity to perform its particular portion of the PWS. The Offeror shall submit a copy of its current approved/issued NRC license(s) or certificate(s) with appropriate conditions that demonstrate its ability to receive, acquire, possess, and transfer Category 1 quantities of HEU and sufficient quantities of LEU to perform the requirements of the PWS and Holding Agreement within the United States. If the Offeror proposes to store any portion of the Remainder LEU outside the United States, pursuant to Article II of the Section J attachment entitled, "Holding Agreement," the Offeror must also then provide a copy of its applicable currently approved/issued nuclear regulatory license(s) or certificate(s) with appropriate conditions, which authorizes the Offeror to receive, acquire, possess, and transfer LEU in the jurisdiction where the proposed storage facility is located.

(2) TAB - 2: Criterion 2, Technical Capacity: The Offeror shall provide the following information to demonstrate that it has or will have active and ready storage, processing, down-blending, packaging, shipping and capacity sufficient to meet the requirements of the PWS and Holding Agreement:

(i) Discuss the available capacity and available infrastructure to support the requirements of the PWS and Holding Agreement. Identify the need for any license or certificate amendments that might be required and the process and schedule required to receive those amendments;

(ii) Identify the location(s) and the need for any additional equipment, facilities, and capabilities necessary to receive, handle, store, process, package and prepare for shipment the HEU and LEU in order to accomplish the requirements in the PWS and Holding Agreement. Explain how the location(s) would be used in the performance of this contract. Indicate whether such facility is a division, affiliate, or subcontractor, and the percentage of work to be performed at each location. Provide a narrative and a graphical description of the facility or areas of the facility that will be utilized for the down-blending activities;

(iii) Describe the Offeror's ability to meet the Government's schedule in accordance with the Section J attachment entitled, "Planned HEU Delivery Schedule" and Section F, paragraph F001, entitled, "Period of Performance" for receiving, processing, and down-blending HEU by providing a narrative description of existing corporate contracts and/or commitments that require HEU receiving, processing, and down-blending services, for the duration of the HEU processing schedule identified in the PWS. The narrative must identify the scope and schedule of the concurrent HEU workload, total

throughput and available capacity for HEU receiving, processing and down-blending, and describe how existing corporate commitments, along with the HEU requirements included in this PWS, will be met. Describe how concurrent workloads will impact the Offeror's ability to accept shipments and process HEU in accordance with the Section J attachment entitled, "Planned HEU Delivery Schedule;"

(iv) Discuss the Offeror's capacity to continue to meet the Unobligated Derived LEU schedule requirements in accordance with the Section J attachment entitled, " Planned HEU Delivery Schedule," Section F, paragraph F001, entitled, "Period of Performance," and the UF_6 schedule requirements in accordance with Article IV, "Quantity and Schedule" of the Holding Agreement; and

(v) Identify any technical risks associated with performance of this solicitation, their impacts, and the Offeror's plan to mitigate the risks.

(3) TAB - 3: Criterion 3, Past Performance

The Offeror shall submit past performance information as requested herein. "Offeror" includes, in the case of a "contractor team arrangement" (as defined in FAR 9.601) all of the members of the Offeror's team including subcontractors that will perform major or critical aspects of the PWS and Holding Agreement.

The Offeror shall submit a completed Past Performance Information Form (see Section L attachment entitled, "Past Performance Information Form") for no more than three contracts performed by the prime Contractor, major subcontractors, or for each proposed team member, as applicable) for relevant contracts performed during the past three years and for on-going contracts for work similar in type, scope, and complexity to that contemplated under the PWS and Holding Agreement where the Offeror was the responsible performing entity. For each of the contracts listed, the Offeror shall describe in the Past Performance Information Form why the work cited is relevant to the work to be performed under the PWS and Holding Agreement. Contracts listed may include federal, state, and local Government and commercial customers.

The Offeror shall provide the Past Performance Questionnaire (see Section L Attachment entitled "Past Performance Questionnaire") to each technical and contracting point of contact listed in Blocks 9a and 9b of the "Past Performance Information Form." These points of contact shall return the completed Past Performance Questionnaires directly to the NNSA Contract Specialist listed in Block 7 of this solicitation's SF 33 or by facsimile at (505) 284-7591. This information should be submitted prior to the date for receipt of proposals. Receipt of the questionnaires by NNSA is not subject to the provisions of the Section L FAR clause 52.215-1 entitled "Instructions to Offerors-Competitive Acquisition" related to late proposals. The Offeror shall be responsible for assuring, to the extent possible, that the completed Past Performance Questionnaires are returned to the Contract Specialist. Offerors are advised that past performance information received more than 5 days after the closing date of this solicitation may not be considered in the evaluation process. At Tab 4, provide a list identifying the contracts and the names, titles, and phone numbers of the respective points of contact that the questionnaires were provided to. For each contract listed: identify the Offeror, or teaming partner/subcontractor for whom the questionnaire is being submitted for.

L028 PROPOSAL PREPARATION INSTRUCTIONS: VOLUME III--COST PROPOSAL (OCT 2008)

(a) Overview: The Contracting Officer has determined that cost or pricing data is not required for this solicitation. However, in accordance with FAR 15.403-3 and 15.403-5, information other than cost or pricing data is required to evaluate competing approaches. If, after receipt of proposals, the Contracting Officer determines that there is insufficient information available to determine price reasonableness and none of the exceptions in FAR 15.403-1 applies, the Offeror shall provide current, complete and accurate cost or pricing data within 14 days after receipt of the Contracting Officer's request.

(b) Submission Format: The cost proposal consists of your proposed fixed price to perform the required effort as set forth in the solicitation and must be prepared in a manner that is current, accurate,

and complete. In accordance with FAR 15.403-5(b)(2), prepare the cost proposal submission using the format specified in the following instructions. Deviation from the prescribed format is permitted to accommodate the Offeror's system; however, the Offeror's proposal must adequately address each proposed price component per these instructions.

(c) Component Pricing: Offerors shall detail the allocation for the overall proposed CLIN prices, as proposed in Section B, which sums to the proposed CLIN pricing. Please note that the CLIN pricing may be zero where an Offeror values the use of the Government-owned LEU as working stock equal to the sum of the associated downblending and storage costs. The Offeror shall provide component pricing information using the illustrative Component Pricing Microsoft EXCEL Sample provided in Attachment L-4 or equivalent.

L029 LIST OF SECTION L ATTACHMENTS (OCT 2008)

ATTACHMENT	TITLE
L-1	Corporate, Partnership, Joint Venture Certificates
L-2	Past Performance Information Form
L-3	Past Performance Questionnaire
L-4	**Component Pricing Microsoft EXCEL Sample**

Corporate, Partnership, Joint Venture Certificates

If the offer is submitted by a corporation, partnership or a Joint Venture, the applicable form provided on the following pages must be completed and submitted in Volume I of the proposal. In the alternative, other evidence must be submitted to substantiate the authority of the person signing the offer. If a corporation, the same officer shall not execute both the offer and the certificate.

CORPORATE CERTIFICATE

I, _____, certify that I am the Secretary of the corporation named as Offeror/Contractor herein; that _____ who signed this offer/contract on behalf of the Offeror/Contractor was then _____ of said corporation; that said offer/contract was duly signed for and on behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____ (CORPORATE SEAL)

AUTHORITY TO BIND PARTNERSHIP

This is to certify that the names and signatures of all partners are listed below and that the person signing the offer had authority to actually bind the partnership pursuant to its partnership agreement. Each of the partners individually has full authority to enter into and execute contractual instruments, on behalf of said partnership, with the United States of America, except as follows: (State "none" or describe limitations, if any.)

This authority shall remain in full force and effect until such time as the revocation of authority by any cause whatsoever has been furnished in writing to, and acknowledged by, the Contracting Officer.

_____	_____
(Type or Print Name)	(Signature)
_____	_____
(Type or Print Name)	(Signature)
_____	_____
(Type or Print Name)	(Signature)
_____	_____
(Type or Print Name)	(Signature)

JOINT VENTURE

Provide a copy of the Joint-Venture (JV) agreement. The SF 33, Solicitation, Offer and Award form must be signed by the party with the authority to bind the JV as indicated in the agreement. Each entity to the JV agreement should complete one of the following entries:

I, _____, certify that I am the Secretary of the Corporation named as Offeror/Contractor herein, that _____ who signed this offer/contract on behalf of the Offeror/Contractor was then _____ of said corporation by authority of its governing body and is within the scope of its corporate powers.

IN WITNESS WHEROF, I have hereunto affixed my hand and the seal of said corporation this _____ day of _____.

AFFIX CORPORATE SEAL

_____
(Secretary)

_____
(Corporation A)

I, _____, certify that I am the Secretary of the Corporation named as Offeror/Contractor herein, that _____ who signed this offer/contract on behalf of the Offeror/Contractor was then _____ of said corporation by authority of its governing body and is within the scope of its corporate powers.

IN WITNESS WHEROF, I have hereunto affixed my hand and the seal of said corporation this _____ day of _____.

AFFIX CORPORATE SEAL

_____
(Secretary)

_____
(Corporation B)

Past-Performance Information Form

1. Complete Name of Customer:	
2. Current Customer Address and Telephone Number	
3. Contract Number and Type of Contract	4. Date of Contract Award
5. Date Work Commenced	6. Date Work Ended
7. Initial Contract Price/Cost and Fee	8. Final Amount Invoiced/Amount Invoiced to Date /
9a. Technical Point of Contact (include address, e-mail, and telephone number)	9b. Contracting Point of Contact (include address and telephone number)
10a. Activity Title	10b. Identify if the contract received a qualified, disclaimer or adverse audit opinion over the past five years. Provide a copy of the auditor's report.
11. Description of Work	
12. Describe how the work under this contract is relevant in type, scope, and complexity to that contemplated under the DE-RP52-08NA28609 PWS and Holding Agreement.	
13. Self-Assessment of past performance record. Provide information on any problems encountered and your corrective actions.	

14. Current Status of Contract (Choose One):

- ☐ Work Continuing, on Schedule
- ☐ Work Continuing, Behind Schedule
- ☐ Work Complete, Litigation Pending or Underway
- ☐ Work Completed, No Further Action Pending or Underway
- ☐ Work Completed, Routine Administrative Action Pending or Underway
- ☐ Work Completed, Claims Negotiations Pending or Underway
- ☐ Terminated for Convenience
- ☐ Terminated for Default
- ☐ Other (explain):

Instructions for Completing the Past-Performance Information Form

Item 1. Insert the complete name and address of the customer, including parent organization, if any. Do not use acronyms.

Item 2. Insert the customer's complete address, including both post office box and street address, if applicable.

Item 3. Insert any contract number or other contract reference used by the customer.

Item 4. Insert the date on which the contract came into existence.

Item 5. Insert the date on which you started to perform the work.

Item 6. Insert the date on which the customer agreed that the work was satisfactorily completed (including substantial completion), aside from any pending or ongoing administrative actions, claims negotiations, or litigation.

Item 7. Insert the price, estimated cost and fee, or target cost and profit or fee as it appeared in the original contract. If the contract included multiple, separately-priced items, add the individual item amounts and insert the total price, estimated cost and fee, or target cost and profit or fee.

Item 8. Insert the final sum of all invoices or the sum of all invoices to date, including agreed upon and disputed amounts, paid and awaiting payment.

Item 9a. Insert the name, title, company/agency, address, telephone number, and e-mail address (if available) of the program or project manager, quality assurance representative, or other customer technical representative who is most familiar with the quality of your work under the contract.

Item 9b. Insert the name, title, company/agency, address, telephone number, and e-mail address (if available) of the contracting officer, purchasing agent, or other customer contracting or purchasing representative who is most familiar with your work under the contract.

Item 10a. Describe the Activity Title.

Item 10b. Identify if the contract received a qualified, disclaimer or adverse audit opinion over the past five years. Provide a copy of the auditor's report.

Item 11. By year performed, describe the nature and scope of the work as it relates to your proposed role in performing the Performance Work Statement (see Section J Appendix entitled, "Performance Work Statement"). The objective is to for you to explain how the work that you did previously or are currently doing is relevant (similar in nature, size in dollars, and complexity) to the scope of work that is to be performed by you under the Contract Performance Work Statement. Include a crosswalk to the Performance Work Statement elements that you are proposed to perform.

Item 12. The objective is to for you to explain how the work that you did previously or are currently doing under this contract is relevant in type, scope, and complexity to that contemplated under the PWS and Holding Agreement.

Item 13. Describe any unusual circumstances of performance or problems that may be relevant to the work that is to be performed. Tell your side of the story of any conflicts with the customer concerning which they may make adverse remarks about your performance. Describe any actions that you have taken or plan to take to correct any shortcomings in your performance.

Item 14. Check appropriate box.

PAST PERFORMANCE QUESTIONNAIRE

The Department of Energy, National Nuclear Security Administration is interested in your assessment of the named company's performance on your contract for the purpose of utilizing this information to evaluate the Contractor's probability of successfully performing a Federal Government requirement that is currently being advertised.

I. CONTRACT IDENTIFICATION

1. This questionnaire relates to work performed by (Name of Contractor (Company/Division):

   at (name and location where work is performed)

2. Contract Number:

3. Brief Description of Requirement (Supplies/Services):
   How much Highly Enriched Uranium (HEU) was down-blended? How much Low Enriched Uranium (LEU) was stored?

4. Contract Type:

5. Period of Performance (Basic and any options):

6. Unusual Contract Features or Conditions:

7. Contract Revisions:
   Were there any requirement de-scopes, partial terminations, major waivers/ deviations, or other important changes to the contract terms and conditions?

8. Contract Value:

	Initial Amount	Current Amount*
Estimated Cost		
Fixed Price		
Fee/Profit		
Total Value		

*Should reflect any contract value increases/decreases since initial contract award

II. PAST PERFORMANCE EVALUATION

Please rate the Contractor as Excellent, Good, Satisfactory, Unsatisfactory, or Not Applicable in the following areas. Please give a short narrative as to why you chose the adjective you did, especially for those areas which are other than "adequate."

A. QUALITY OF PRODUCT OR SERVICES

1. Compliance with contract terms and conditions.

   Rating:

2. Quality of services and support provided including content and accuracy of technical, cost, or other reports.

   Rating:

B. TIMELINESS OF PERFORMANCE

Timely completion of deliverables and/or milestones on contracts/tasks.

Rating:

C. COST CONTROL

1. Was there any cost growth or increases in firm-fixed price amounts? If so, were they beyond the control of the Contractor? Please explain circumstances.

   Rating:

2. Were there any contract revisions that impacted the contract value adversely, and what were they due to?

   Rating:

3. Change proposals submitted were reasonably priced and contained all appropriate supporting documentation.

   Rating:

D. BUSINESS PRACTICES

1. Contractor's ability in developing and managing subcontracts and consulting agreements.

   Rating:

2. Contractor's skills in efficiently and effectively allocating resources to meet customers needs.

   Rating:

3. Contractor's reasonable and cooperative behavior, flexibility, as well as their responsiveness to inquiries from your organization's technical and contract representatives.

Rating:

E. CUSTOMER SATISFACTION

1. Were there any significant problems encountered by the Contractor? Yes ☐ No ☐

   Rating:

   If yes, states the problem(s), what corrective actions were taken by the Contractor, and indicate whether you consider these corrective actions to be effective?

2. Please comment on the overall satisfaction of your organization's technical monitors with final reports and products.

3. Additional comments both positive and negative (please address any unfavorable ratings identified in Part I and II above).

III. RESPONDENT INFORMATION

1. Name of Evaluator(s):
2. Position Title:
3. Organization Name and Mailing Address:

4. Telephone Number: Fax Number:
5. E-mail Address:
6. Date Questionnaire Completed:

Thank you for completing this important questionnaire. Please return the questionnaire by any method as follows:

Mailing Address:
NNSA Service Center
Attention: **Leticia Potts**, OBS/FAD
P.O. Box 5400
Albuquerque, NM 87185-5400

Fax: (505) 284-7591

E-mail: lpotts@doeal.gov

Price per KgU:

HEU Metal Pricing Allocation:	**Price Per KgU**
Downblending Component Price	$xx.xxxx
Diluent Component Price	$xx.xxxx
Storage Component Price	$xx.xxxx
All Other Component Prices	$xx.xxxx
Price Reduction Based on using Government LE	($xx.xxxx)
Sum Total	$0.0000

HEU Oxide Pricing Allocation:	
Downblending Component Price	$xx.xxxx
Diluent Component Price	$xx.xxxx
Storage Component Price	$xx.xxxx
All Other Component Prices	$xx.xxxx
Price Reduction Based on using Government LE	($xx.xxxx)
Sum Total	$0.0000

HEU Reactor Fuel Pricing Allocation:	
Downblending Component Price	$xx.xxxx
Diluent Component Price	$xx.xxxx
Storage Component Price	$xx.xxxx
All Other Component Prices	$xx.xxxx
Price Reduction Based on using Government LE	($xx.xxxx)
Sum Total	$0.0000

Extended Price:

HEU Metal Pricing Allocation:	**Price Per KgU**	**Proposed Yield**	**Product $KgU x Yield**
Downblending Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Diluent Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Storage Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
All Other Component Prices	$xx.xxxx	xx,xxx	$xx,xxx.
Price Reduction Based on using Government LE	($xx.xxxx)	xx,xxx	($xx.xxxx)
Sum Total	$0.0000	0	$0

HEU Oxide Pricing Allocation:			
Downblending Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Diluent Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Storage Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
All Other Component Prices	$xx.xxxx	xx,xxx	$xx,xxx.
Price Reduction Based on using Government LE	($xx.xxxx)	xx,xxx	($xx.xxxx)
Sum Total	$0.0000	0	$0

HEU Reactor Fuel Pricing Allocation:

Downblending Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Diluent Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
Storage Component Price	$xx.xxxx	xx,xxx	$xx,xxx.
All Other Component Prices	$xx.xxxx	xx,xxx	$xx,xxx.
Price Reduction Based on using Government LE	($xx.xxxx)	xx,xxx	($xx.xxxx)
Sum Total	$0.0000	0	$0

NOTES:
1. Limit price per KgU to no more than four decimal places.
2. Round yield to nearest whole KgU LEU.
3. Round extended price per type of HEU to whole dollar.

NOTICE: The following solicitation provisions pertinent to this section are hereby incorporated in full text:

NNSA OTHER SOLICITATION PROVISIONS IN FULL TEXT

M001 EVALUATION OF PROPOSALS (SEP 2008) (TAILORED)

(a) Using the procedures established in FAR 15.3 and Department of Energy Acquisition Regulation (DEAR) Part 915, the award of a contract as a result of this solicitation will be based on an integrated assessment of each Offeror's proposal against the evaluation criteria in M003 below. In addition, for a proposal to result in a contract award, the proposal must also meet all the RFP requirements, including those identified as criteria, as well as being determined to be a responsible Offeror pursuant to FAR 9.104-1.

(b) The Offeror must furnish adequate and specific information in its response. Simply repeating the PWS or the Holding Agreement requirements or merely offering to perform the work may result in a lower evaluation or the offer being determined technically unacceptable.

(c) A proposal will be eliminated from further consideration if the proposal is so grossly and obviously deficient as to be totally unacceptable on its face. For example, a proposal will be deemed unacceptable if it does not represent a reasonable initial effort to address itself to the essential requirements of the RFP, or if it clearly demonstrates that the Offeror does not understand the requirements of the RFP. In the event that a proposal is rejected, a notice will be sent to the Offeror stating the reasons that the proposal will not be considered for further evaluation under this solicitation.

(d) For the purpose of evaluating information in an Offeror's proposal, the Government will consider information on all of those companies comprising the Offeror's "contractor team arrangement" (as defined in FAR 9.601) that will perform major or critical aspects of the PWS and Holding Agreement as well as on the single legal entity submitting the offer. The Government may contact some or all of the references provided by the Offeror, and may solicit past performance information from other available sources.

(e) As discussed in the Section L, Provision L014, the Government intends to evaluate proposals and award a contract without discussions with Offerors (except clarifications as described in FAR 15.306(a)). Therefore, the Offeror's initial proposal should contain the Offeror's best terms. The Government reserves the right to conduct discussions if the Contracting Officer later determines them to be necessary. If it is determined that discussions are necessary a determination of competitive range will be made pursuant to 15.306(c).

(f) Exceptions or deviations to any terms and conditions of the solicitation will not render the proposal unacceptable; however, any exceptions or deviations to the terms of the solicitation may make the offer unacceptable for award without discussions. If an Offeror proposes exceptions to the terms and conditions of the contract, the Government may make an award without discussions to another Offeror that did not take exception to the terms and conditions of the solicitation.

(g) An overall rating of unsatisfactory in one evaluation criterion may result in elimination of the proposal from further consideration regardless of the rating of the other criteria or subcriteria. An overall criterion rating of unsatisfactory may result from one subcriterion within a criterion being rated unsatisfactory, or from more than one subcriterion within a criterion being rated marginal.

M002 BASIS OF CONTRACT AWARD (FEB 2005) (TAILORED)

(a) The Government intends to award one contract to the responsible Offeror whose proposal is responsive and is determined to be the best value to the Government. Selection of best value to the Government will be by use of the trade-off process described in FAR Part 15. This process permits

tradeoffs between cost/price and technical evaluation criteria and allows the Government to accept other than the lowest price offered. Pursuant to FAR 9.104-2, Special Standards of Responsibility, the Offeror must be able to meet Evaluation Criterion 1. If an Offeror fails to satisfy the minimum requirements of Evaluation Criterion 1, the Offeror may be considered "non-responsible" and eliminated from further consideration.

(b) Selection of the best value to the Government will be achieved through a process of evaluating and assessing the strengths and weaknesses of each Offeror's proposal against the evaluation criteria described below. In determining the best value to the Government, Criterion 2 - Technical Capacity is significantly more important than Criterion 3 - Past Performance.

(c) In accordance with FAR 15.304(e), Evaluation Criteria 2 and 3, when combined, are significantly more important than price; however, price will contribute substantially to the selection decision. The Government is more concerned with obtaining a superior technical proposal (the two criteria) than making an award at the lowest evaluated total price. However, the Government will not make an award at a price premium it considers disproportionate to the benefits associated with the evaluated superiority of one Offeror over another. Thus, to the extent Offerors' evaluated Technical Capacity and Past Performance are close or similar in merit, the evaluated price is more likely to be a determining factor.

M003 EVALUATION CRITERIA (OCT 2008)

The Offeror's proposal will be evaluated against the evaluation criteria as they relate to the requirements of the solicitation.

Special Standard of Responsibility Criterion

(a) Evaluation Criterion 1 - NRC License(s) and/or Applicable Certificate(s): The Government will determine whether the Offeror, or as may be applicable, its team members or subcontractors, holds a current NRC approved/issued license(s) or certificate(s) with appropriate conditions, which authorizes the licensee or certificate holder to receive, acquire, possess, and transfer Category 1 quantities of HEU and sufficient quantities of LEU to perform the requirements of the PWS and Holding Agreement within the United States. Each team member/subcontractor is not required to possess a current license or certificate to receive, acquire, possess, and transfer the Category 1 quantities of HEU and sufficient quantities of LEU within the United States , but the Offeror, or, as may be applicable, its teaming members or subcontractors will be evaluated to determine whether it possesses the appropriate and applicable current license(s) or certificate(s) that authorizes each entity to perform its particular portion of the PWS. If the Offeror proposes to store any portion of the Remainder LEU outside the United States, pursuant to Article II of the Section J attachment entitled, "Holding Agreement," the Government will also determine whether the Offeror holds the applicable nuclear regulatory license(s) or certificate(s) with appropriate conditions, which authorizes the Offeror to receive, acquire, possess, and transfer LEU in the jurisdiction where the storage will be provided. The Offeror may be found responsible only if the Offeror demonstrates it possesses an NRC license(s) and if applicable, comparable nuclear regulatory license(s) or certification(s) from the applicable and relevant regulatory authority or governing body if any portion of the Remainder LEU storage is proposed to be outside the United States, consistent with the requirements above.

Best Value Criteria

(b) Evaluation Criterion 2 - Technical Capacity: The Government will evaluate and assess whether the Offeror has or will have active and ready storage, processing, down-blending, packaging, shipping capabilities and capacity sufficient to meet the requirements of the PWS and Holding Agreement. This will include consideration of:

(i) The Offeror's available capacity and available infrastructure; the need for any additional licenses or certificate amendments; and any schedule for receiving those amendments.

(ii) The location(s) and the need for additional equipment, facilities and capabilities necessary to receive, handle, store, process, package and prepare for shipment the HEU and LEU contemplated by this solicitation; how the location(s) to accomplish the PWS and Holding Agreement and proposed new locations would be used in the performance of this contract; and the facility or areas of the facility that will be utilized for the down-blending activities.

(iii) The extent to which the Offeror can meet the Government's schedule as defined in the PWS for receiving, processing, and down-blending HEU. This will include consideration of existing corporate contracts and/or commitments that require HEU receiving, processing, and down-blending services for the duration of the HEU processing schedule identified in the PWS; the scope and schedule of the concurrent HEU workload; total throughput and available capacity for HEU receiving, processing and down-blending; how existing corporate commitments, along with the HEU requirements included in this PWS, will be met; and how concurrent workloads will impact the Offeror's ability to accept shipments and process HEU in accordance with the schedule identified in the PWS.

(iv) The Offeror's capacity to meet the Unobligated Derived LEU schedule requirements in accordance with the Section J attachment entitled, " Planned HEU Delivery Schedule" and Section F, paragraph F001, entitled, "Period of Performance," and UF_6 schedule requirements in accordance with Article IV, "Quantity and Schedule," of the Holding Agreement.

(v) Any technical risks associated with performance of this solicitation, their impacts, and the Offeror's plan to mitigate the risks.

(c) Evaluation Criterion 3 - Past Performance. The Government will evaluate the quality of the Offeror's relevant past performance to determine the degree to which the past performance demonstrates the Offeror's ability to successfully perform the requirements of the PWS and Holding Agreement. If the Offeror does not have a record of relevant past performance information on contracts similar to the PWS and Holding Agreement, or past performance information is otherwise not available, the Offeror will not be evaluated favorably or unfavorably on past performance. "Offeror" includes, in the case of a "contractor team arrangement" (as defined in FAR 9.601) all of the members of the Offeror's team including subcontractors that will perform major or critical aspects of the PWS and Holding Agreement.

(d) Price Evaluation. Price is not scored/weighted but will be evaluated as shown below. The price evaluation will be based upon a comparison of the current market value on the solicitation closing date of the Offeror's proposed number of derived KgU LEU less the total proposed price for down-blending services. The current market value is defined as the arithmetic average of the indices cited in the Compensation Clause (G002) and based on the most recent, published indices for the month preceding the solicitation closing date. For award purposes, the total evaluated proposed price shall be the summation of the extended market prices and proposed prices for Section B CLIN 0001 and determined as follows:

(1) HEU Metal (Alloyed and Unalloyed at 9,002 KgU which includes 7,516 Kg U^{235} is priced at (A) $_____ per KgU of Derived LEU (inclusive of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from metal (insert Kgs) _____ for a total extended price of $_____;

(2) HEU Oxide and Compounds at 3,099 KgU which includes 2,113 Kg U^{235} is priced at (B) $_____ per KgU of Derived LEU (inclusive of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from oxide and compounds (insert Kgs) _____ for a total extended price of $_____;

(3) HEU Reactor Fuel,Sources and Standards at 48 KgU which includes 38 Kg U^{235} is priced at (C) $ _____ per KgU of Derived LEU (inclusive of Diluent cost) multiplied by the Contractor's proposed number of KgU LEU derived from reactor fuel, sources, and standards (insert Kgs) _____ for a total extended price of $_____

(4) Total for extended price of items (1) through (3) above: $_____